# Volume I - Final Phase III Remedial Investigation Report Time Oil Northwest Terminal Portland, Oregon

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Prepared for

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# **EXECUTIVE SUMMARY**

Beginning in the fall of 2001, Landau Associates conducted the third phase of a remedial investigation (RI) for Time Oil Co. (Time Oil) at its Northwest Terminal (Terminal) in Portland, Oregon. This third phase of the RI (referred to as the Phase III RI) followed Phases I and II of the RI and was conducted to complete the assessment of the nature and extent of contamination in soil and groundwater at the Terminal. The earlier phases addressed soil and groundwater within an area of the Terminal where a pentachlorophenol (PCP) mixing operation was formerly located and where waste oil was formerly stored (Phase II), and where a stockpile containing soil excavated from the former PCP mixing area was temporarily placed (Phase I). Investigations for the third phase focused on areas where petroleum products were stored and handled. This report comprehensively describes the nature and extent of soil and groundwater contamination throughout the Terminal, as defined by all three phases of the RI. Each RI phase has been conducted in accordance with the State of Oregon's Hazardous Substance Remedial Action Rules (OAR 340-122), with oversight by the Oregon Department of Environmental Quality (DEQ), under the provisions of the voluntary cleanup program (VCP) agreement between Time Oil and DEQ dated September 5, 1996. The information obtained in this Phase III RI will be used with information obtained during Phase II of the RI in a human health and ecological risk assessment and a subsequent feasibility study of potential remedial actions.

# **FACILITY DESCRIPTION**

The Time Oil Terminal is a former bulk petroleum storage and transfer facility currently owned and operated by Time Oil Co. Time Oil ceased operations at the Terminal on October 31, 2001. From 1943 to 2001, the Terminal was operated by Time Oil as the Northwest Terminal petroleum products facility. Since operations began, the Terminal was used for the receipt, storage, and distribution of petroleum and petroleum-related products. Historically, Time Oil leased tank space to Crosby & Overton for storage of waste oils, and the Koppers Company leased tanks and property at the Terminal for the formulation of PCP-containing wood treatment products. Within the Terminal, the specific areas of focus for the Phase III RI include:

• Northwest Terminal tank farm areas where various petroleum products were stored and handled. Bulk product Terminal areas are located in the western and southern portions of the facility adjacent to the Willamette River. The tank farm areas include 21 aboveground storage tanks (ASTs) in the Main Terminal Tank Farm area and 10 ASTs in the Bell Terminal Tank Farm area. The storage tanks range from 3,000 to 80,000 barrels in size. Currently, all tanks are empty except for tank 16804 in the Main Terminal Tank Farm area, which temporarily stores water from the groundwater interim action wells RW-2 and HRW-1 and water collected from the groundwater intercept system in the east-west trending storm drain at SDM-1 prior to treatment by the onsite wastewater system. At the Bell Terminal Tank

Farm area, a strip of land approximately 80 ft wide along the entire western property boundary and outside of the tank farm wall was apparently used by owners/operators of the adjacent property to the west for approximately 25 years, ending in 2000, based on historical aerial photographs.

- **Butane and aviation gasoline storage areas** located to the southeast of the Terminal office. These areas include two ASTs formerly used for storage of aviation gasoline and one AST formerly used for butane storage. Currently, all tanks are empty.
- Former petroleum transfer and receipt facilities include above- and below-ground piping; product receipt facilities via rail, truck, and vessel; and product distribution facilities via truck and rail (loading racks), and via marine vessels (a 380-ft dock in the Willamette River). A former rack for loading trucks is located just west of the Terminal office. A former loading rack for rail transfer and receipt is located at the terminus of the rail spur to the east of the Terminal office. A former loading rack for the Bell Terminal Tank Farm area is located at the eastern side of the Bell Terminal Tank Farm area. Historically in these areas, product was transferred from the railcar, truck, or vessel to the above-ground tanks through pipelines located near each of the receipt/distribution locations. None of the equipment in these areas is currently in use.
- Wastewater treatment system located in the northern portion of the facility where groundwater recovered from the two groundwater interim action recovery wells, the groundwater intercept system in the storm drain, and investigation-derived groundwater from purging of monitoring wells during quarterly sampling events is treated before discharge to the City of Portland's sanitary sewer.
- Entrance, former office, warehouses, and equipment maintenance area located in the northern portion of the facility.
- Undeveloped area of the Terminal located in the eastern portion of the Terminal. This area is a currently and historically undeveloped area. Only the western portion of this area was included in the Phase III RI. The remaining portion of this area (referred to as the East Property) was studied outside of the RI and has been granted a conditional No-Further-Action (NFA) determination by DEQ.

Other features located within the Terminal that were not the focus of the Phase III RI, but have been included in earlier phases of the RI, include:

- Former PCP mixing area where specialty wood treating products containing PCP in various formulations (typically with petroleum-based carriers) were blended and stored for offsite shipment. The former PCP mixing area is located in the approximate center of the Terminal, and includes the former PCP warehouse and the area south of the warehouse (formerly occupied by various mixing and storage tanks, which were removed by 1982). During a soil removal action in fall 2002, 6,400 yd³ of PCP-impacted soil were excavated from these areas for offsite incineration and disposal. The Phase II RI report describing this area was submitted to DEQ on February 9, 2001. The soil removal actions completion report was submitted to DEQ on November 10, 2003.
- Former Crosby & Overton tank area located directly south of the former PCP mixing area where waste oils were previously stored in two ASTs. The tanks have since been removed from this area. During a soil removal action in fall 2002 (in conjunction with the former PCP)

mixing area), 819 tons of polychlorinated biphenyl (PCB) and carcinogenic polycyclic aromatic hydrocarbon (cPAH)-impacted soil was excavated from this area for offsite thermal treatment and disposal. The Phase II RI report describing this area was submitted to DEQ on February 9, 2001. The soil removal actions completion report was submitted to DEQ on November 10, 2003.

• Former soil stockpile area where approximately 3,600 yd³ of soil that was excavated from the former PCP mixing area in 1989 or was transferred from the East Property during interim removal actions in 1996-1997 was temporarily located. The stockpile was located southwest of the former PCP mixing area and north of an inactive soil treatment area. The former stockpile was removed for incineration and disposal offsite during Phase I/II soil removal actions conducted in fall 2002. The Phase I RI report describing the former soil stockpile area was submitted to DEQ on April 25, 1997. The soil removal actions completion report, including removal of the soil stockpile, was submitted to DEQ on November 10, 2003.

### SCOPE OF THE PHASE III RI

The purpose of the Phase III RI was to characterize the nature and extent of contamination and complete the conceptual site model for the Terminal and to obtain information adequate for assessing risks to human health and the environment. For this purpose, the scope of the Phase III RI included: collecting soil and groundwater samples for chemical analysis within those areas (referred to as the Phase III study area) of the Terminal not previously investigated during Phase I and Phase II of the RI or during East Property investigations; collecting soil samples to better define the hydrogeologic units for the Terminal; and groundwater monitoring to determine groundwater flow within each hydrogeologic unit throughout the Terminal area. This included collecting more than 250 soil samples and groundwater samples from a maximum of 82 wells for chemical analyses on a quarterly basis; monitoring groundwater levels at the 82 monitoring well locations; and logging subsurface soil conditions at more than 160 soil boring locations.

# PHASE III RI ACTIVITIES

The Phase III RI was conducted in three stages: a preliminary evaluation, an interim subsurface investigation, and a final soil and groundwater investigation:

A preliminary evaluation was conducted in the fall of 2001 to evaluate the general distribution of hazardous substances in groundwater and soil within the Phase III study area and to collect geologic, hydrogeologic, and chemical data in advance of a full-scale Phase III RI to focus future sampling efforts. This evaluation included collecting composite soil samples within 27 grids and 17 biased areas using direct-push methods. Also, during the implementation of the preliminary investigation, Schnitzer Investment Corporation (Schnitzer) collected soil and groundwater samples at nine direct-push borings located on the Time Oil property just west of the Bell Terminal Tank Farm area. During the sampling, Landau Associates collected split soil and groundwater samples at each boring for Time Oil.

- An interim subsurface investigation was conducted in July 2002 to better understand the subsurface geology and hydrogeology prior to selecting Phase III RI permanent monitoring well locations. The investigation included: 1) collecting lithological information at 27 locations within the Phase III study area using the cone penetrometer technique (CPT), 2) collecting soil samples at 10 locations in the Bell Terminal Tank Farm area using direct-push sampling techniques, and collecting groundwater samples at these locations from temporary well points, and 3) collecting five discrete soil samples in certain areas where soil composite samples were collected during the preliminary evaluation and additional information was needed.
- Final stage soil and groundwater investigations were conducted within the Phase III study area from August through October 2003. For these investigations, soil samples were collected from 27 soil borings and 15 hand-dug holes. Twelve monitoring wells (four shallow and eight deep) were installed in the Main Terminal Tank Farm area and 10 monitoring wells (seven shallow and three deep) were installed in the Bell Terminal Tank Farm area.
- A supplemental investigation was conducted within the Phase III study area from October through November 2004. Twelve additional monitoring wells were installed: one upper zone and two lower zone wells within the Main Terminal Tank Farm area, four lower zone wells on the shoreline of the Willamette River, four upper zone wells within the Bell Terminal Tank Farm area, and one lower zone well to replace the well that was damaged during implementation of the *in situ* chemical oxidation technique for remediation of shallow soil and groundwater associated with the former PCP mixing area.

# PHASE III RI RESULTS

The results of the Phase III RI investigations were used to determine the locality of facility, the nature and extent of contamination at the Terminal, and the fate and transport processes of these contaminants, as described below.

# Locality of Facility

Locality of the facility is defined by DEQ rule as "any point where a human or an ecological receptor contacts, or is reasonably likely to come into contact with, facility-related hazardous substances." OAR 340-122-115(34). Based on the soil and groundwater data collected to date, the locality of the facility for the Terminal has been defined to include all of the Phase II and Phase III study areas and the shoreline of the Willamette River west of the Main Terminal Tank Farm area extending to the locations of the shoreline wells. Based on the shoreline groundwater data collected in November 2004, February 2005, and June 2005, facility-related groundwater contaminants are currently reaching the river at concentrations below applicable screening level values. These data indicate that, even though there is a physical groundwater transport pathway from the upland areas of the terminal to the river, there is not a complete exposure pathway via groundwater at the Time Oil

facility to the Willamette River. Therefore, groundwater discharge to the Willamette River is not a current or future beneficial use of the groundwater and the Willamette River is not within the locality of the Time Oil facility. Groundwater concentrations in the shoreline wells will be confirmed through a full year of groundwater monitoring. Also, Time Oil is planning to conduct a source control evaluation to determine whether there is a potential for constituents currently observed in wells within the Main Tank Farm Area to migrate to the river. Historical discharges to the river, including discharges via the storm drain will be addressed during the RI/FS for the Portland Harbor Superfund Project. Low level detections of PCP have been observed intermittently within the lower zone at the southern property boundary of the Terminal. The current groundwater interim action has effectively reversed downgradient groundwater flow near this area; however, because the predominant groundwater flow direction from this area is to the west/southwest toward the river (Bridgewater Group 1998, 2001) and there is potential for migration of these concentrations to the river outside the influence of the interim action, a small portion of the Former Premier Edible Oils (PEO) property south of the property boundary near the river is included in the locality of facility. Other properties downgradient of the Terminal include the former PEO property located west of the Bell Terminal Tank Farm area. The property west of the Bell Terminal Tank Farm area has not been included in the locality of the facility because, although contaminants have been detected in soil and groundwater along the western property boundary, the data indicate that there appears to be a separate source for contamination in this area and also in the area on the former PEO property where product has been observed in well MW-4 on a consistent basis between 2001 and 2003 (the most recent data available). No product has been observed in soil or groundwater within the Bell Terminal Tank Farm area. Even though it is likely that the plume originating from the central portion of the Bell Terminal commingles with the plume originating near the western property boundary, and that both of these plumes commingle with other contamination originating on the former PEO property where significant petroleum releases are known to have occurred, such as in the area where the former diesel above-ground storage tanks (ASTs) were located near well MW-4, it is unlikely that the elevated concentrations observed near the western property boundary or on the former PEO property originate from the Bell Terminal. This conclusion is based on the significant increase in both soil and groundwater concentrations for petroleum constituents across the western property boundary and on the former PEO property. Therefore, the locality of facility boundary was extended to the western property boundary. Data from the adjacent property is not sufficient to identify the point at which any plume moving from the Bell Terminal terminates within plumes originating at the PEO property in order to define the locality of the facility in this area with certainty.

Data collected during the fourth quarter 2004 event from the new wells located at the north property boundary of the Main Terminal Tank Farm area, indicate that low levels of contaminants were detected in groundwater in this area. During June 2005 and November 2005, Time Oil attempted to sample two existing wells on the Port of Portland property located within 300 ft of the Terminal's north property boundary. Both wells were dry. Sampling of these wells will be attempted again during the wet season, in February 2006. If sampling of these wells is again unsuccessful, a recommendation will be provided to DEQ on a methodology for definition of the locality of facility in this area. Until sample results are collected and evaluated from this area, the locality of facility boundary in this area is approximate, but assumed to extend to the north property boundary.

# Nature and Extent of Contamination: Soil

The nature and extent of contamination in soil for the Terminal was evaluated by operational areas: the Main Terminal and Bell Terminal Tank Farm areas, the loading rack/entrance area of the Main Terminal, the eastern portion of the Phase III study area, the asphalt-paved road area, and the Phase II study area. These areas are shown on Figure 1-2. Preliminary screening levels, based on various published federal and state criteria and site-specific background concentrations, were used to compare to the observed soil concentrations. The Phase III RI data evaluation indicated the following:

- Petroleum hydrocarbons and constituents commonly associated with petroleum products [i.e., PAHs and volatile organic compounds (VOCs)] were detected in soil in the unsaturated zone within the Main Terminal and Bell Terminal Tank Farm areas. The highest concentrations and the most exceedances of preliminary soil screening levels were detected at the capillary fringe within each tank farm area.
- The presence of non-aqueous phase liquid (NAPL) was observed in soil during drilling at well LW-27S located in the central portion of the Main Terminal Tank Farm area at a depth of 22.5 ft below ground surface (BGS). Slight to heavy sheens were observed on subsurface soil samples collected at several locations within the Main Terminal Tank Farm area and the Bell Terminal Tank Farm area. These sheens were observed in soil at depths ranging between 3.5 to 34 ft BGS in the Main Terminal Tank Farm area and at depths ranging from 12.5 to 19.5 ft BGS in the Bell Terminal Tank Farm area.
- Along the western portion of the Main Terminal Tank Farm area, diesel-range and motor oil-range petroleum hydrocarbons were detected in the upper 1.5 ft of soil at concentrations up to 438 mg/kg and 308 mg/kg, respectively. Within the capillary fringe, diesel-range and gasoline-range petroleum hydrocarbons were detected in the soil at two locations: LW-24D and LW-35D located near the top of the river bank. The maximum gasoline-range and diesel-range petroleum hydrocarbons (12.7 mg/kg and 44.3 mg/kg, respectively) at this depth occurred at LW-35D located in the northwest corner of the Main Terminal. Concentrations of PAHs exceeding the preliminary screening levels were also reported for soil collected from the capillary fringe depth interval at three locations along the western boundary of the Main Terminal Tank Farm area, including locations LW-24D, LW-25D, and LW-35D.

- In the Bell Terminal Tank Farm area, total petroleum hydrocarbon-contaminated soil was found within two areas: along the western property boundary where, based on historical aerial photographs, owners/operators of the adjacent property used the property until approximately 2000, and in the central portion of the tank farm. The highest concentrations of contaminants in soil occur along the western property boundary. Diesel-range and gasoline-range petroleum hydrocarbons were found at the capillary fringe in this area at concentrations of 15,100 mg/kg and 8,750 mg/kg, respectively. Within the central portion of the Bell Terminal Tank Farm area, gasoline- and diesel-range petroleum hydrocarbon concentrations present in soil appear to have originated from different sources than those along the western property boundary because of the decreases in concentrations between the two areas. The TPH concentrations within the central portion of the tank farm are likely a result of minor, incidental releases related to operations within the Bell Terminal Tank Farm area. The source of TPH concentrations outside the operational area of the Bell Terminal Tank Farm near the western property boundary is unknown.
- In the loading rack/entrance area of the Main Terminal Tank Farm area, zinc and gasoline-range petroleum hydrocarbons are detected at concentrations exceeding preliminary screening levels. Elevated concentrations of gasoline-range petroleum hydrocarbons are associated with a composite sample collected at the capillary fringe in an area (biased area B3) where trucks were formerly loaded.
- PAHs and metals were detected in the soil in the eastern portion of the Phase III study area. Concentrations exceeding preliminary screening levels are most frequently found at the 0 to 0.5-ft depth interval. These concentrations appear to be associated with historic road oiling for dust suppression in this area. Diesel-range petroleum hydrocarbons were also detected in the surface soil, but not at concentrations exceeding the preliminary screening level.
- Within the asphalt-paved road area, TPH, PAHs, and metals were detected in the surface soil. At depths greater than 0.5 ft BGS, only metals were found in soil in this area. Contaminants found in the surface soil likely result from the presence of these constituents in the roadbase material of the asphalt road.
- Within the Phase II study area, PCP concentrations ranging from nondetect to 180 mg/kg potentially remain in soil at depths at and greater than about 13 ft BGS. This soil was not excavated during the removal action performed in the former PCP mixing area due to limitations in excavating soil below the water table and the plan to use *in situ* chemical oxidation (ISCO) to remediate soil and groundwater at this depth. Residual levels of PCP will be determined following completion of the full scale ISCO injection events. Other constituents associated with the PCP-formulating operations (diesel-range, motor oil-range, and gasoline-range TPH, PAHs, VOCs, and metals) are present in the surface soil and at depths at or deeper than the capillary fringe. Concentrations of several of the constituents exceed preliminary screening levels.

# Nature and Extent of Contamination: Groundwater

The nature and extent of contamination in groundwater was evaluated by the same operational areas. Preliminary screening levels, based on various published federal and state criteria, were used for comparison to the observed groundwater concentrations. A summary of the Phase III groundwater results follows:

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# Main Terminal Tank Farm Area

- Diesel-range and gasoline-range petroleum hydrocarbons are present throughout the upper zone groundwater in the Main Terminal Tank Farm area at concentrations ranging from nondetect to 24 mg/L for the October 2003 event and ranging from nondetect to 6.5 mg/L for the November 2004 sampling event. Constituents typically associated with diesel-range and gasoline-range petroleum hydrocarbons (i.e., PAHs and VOCs) are also present in the upper zone groundwater in the Main Terminal Tank Farm area, but these plumes are not as widespread as the TPH plumes. Metals were detected in the upper zone groundwater throughout the Main Terminal Tank Farm area at concentrations typically less than site-specific background concentrations.
- The gasoline-range petroleum hydrocarbon and VOC plumes present in upper zone groundwater in the Main Terminal Tank Farm area extend into the western portion of the loading rack/entrance area.
- Light non-aqueous phase liquid (LNAPL) has been previously documented in the upper zone groundwater in the Main Terminal Tank Farm area at monitoring wells N, P, Q, LW-21S, LW-27S and direct-push point GW8-1. The thickness of LNAPL present at these locations varies over time and between locations. The thicknesses range from 0.01 to 1.2 ft.
- Diesel-range and gasoline-range petroleum hydrocarbons, PAHs, VOCs, and metals are present at concentrations exceeding preliminary screening levels in the lower zone groundwater along the western portion of the Main Terminal Tank Farm area where the confining unit is discontinuous or not present and the upper and lower groundwater zones converge; however, concentrations are typically significantly less than those detected in the upper zone groundwater in these areas. Within the western portion of the Main Terminal Tank Farm area, where the confining unit is present, fewer occurrences of contaminants in the lower zone groundwater are observed.
- Concentrations of diesel- and gasoline-range TPH, benzene, and ethylbenzene in the samples from the upper and lower zone wells within the Main Terminal Tank Farm area generally decreased or did not change significantly over time.
- Concentrations of diesel-range TPH concentrations in the lower zone within the Main Terminal Tank Farm area tend to be significantly greater than gasoline-range TPH concentrations at the same locations over time, but less overall than the upper zone concentrations for these constituents. TPH concentrations in groundwater from lower zone wells located beyond the extent of the confining unit in the Main Terminal Tank Farm area tend to be greater than from wells farther to the east where the confining unit is present. This is likely the result of upper zone groundwater with higher TPH concentrations mixing with lower zone groundwater downgradient of the confining unit boundary. Gasoline-range concentrations for the lower zone wells in the Main Terminal Tank Farm area showed similar overall trends to the diesel-range concentrations.

# **Bell Terminal Tank Farm Area**

• Groundwater data collected within the Bell Terminal Tank Farm area and on the former PEO property suggest the presence of three commingled petroleum hydrocarbon plumes within this area: 1) one originating in the central portion of the Bell Terminal Tank Farm

area near the east-west trending pipeline, 2) one originating along the western property boundary outside the walls of the tank farm, and 3) one originating on the eastern portion of the former PEO property where significant petroleum releases are known to have occurred, such as in the area where the former diesel ASTs were located. Even though it is likely that the plume originating from the central portion of the Bell Terminal commingles with the plume originating near the western property boundary, and that both of these plumes commingle with other contamination originating on the former PEO property in the area where the former diesel ASTs were located, it is unlikely that the elevated concentrations observed near the western property boundary or on the former PEO property originate from the Bell Terminal tank farm operations. This conclusion is based on the significant increase in both soil and groundwater concentrations for petroleum constituents across the western property boundary and on the former PEO property. Also, product has consistently been observed with thicknesses up to about 6 ft in wells on the eastern portion of the former PEO property (well MW-4) between 2001 and 2003, but no product has ever been observed within the Bell Terminal Tank Farm area. This contaminant distribution supports the presence of different sources than in the Bell Terminal Tank Farm area.

- The maximum concentration of petroleum hydrocarbons in upper zone groundwater in the Bell Terminal Tank Farm area (796 mg/L for diesel-range hydrocarbons) was found near the western property boundary based on a direct-push sample collected in 2001. Constituents associated with diesel-range and gasoline-range petroleum hydrocarbons (i.e., PAHs and VOCs) are also present in the upper zone groundwater in the Bell Terminal Tank Farm area; however, the areas of impacted groundwater for these constituents appear to be smaller than the areas of groundwater impacted by petroleum hydrocarbons. Petroleum hydrocarbon concentrations increase across the western property boundary and on the former PEO property to maximum concentrations of 6.8 mg/L for diesel-range hydrocarbons and 38.7 mg/L for gasoline-range hydrocarbons at direct push location B-60.
- No LNAPL was observed on upper zone groundwater in the Bell Terminal Tank Farm area. LNAPL has consistently been observed between 2001 and 2003 (only data available) in well MW-4 located on the former PEO property near the locations of the former diesel ASTs.
- Except for diesel-range petroleum hydrocarbons and metals, contaminants are not present in the lower zone groundwater in the Bell Terminal Tank Farm area. A low level concentration of diesel-range petroleum hydrocarbons (0.35 mg/L) was observed at well LW-32D. Metals (chromium, copper, nickel, and zinc) were observed at three lower zone monitoring well locations at concentrations ranging from 0.004 to 0.01 mg/L.
- Lower zone groundwater concentrations in the Bell Terminal Tank Farm area for dieseland gasoline-range TPH, benzene, and ethylbenzene are much less than the upper zone
  concentrations. Diesel- and gasoline-range TPH concentrations are much less in upper
  zone groundwater in the Bell Terminal Tank Farm area than in the Main Terminal Tank
  Farm area.
- Concentrations of petroleum constituents in the lower zone increase significantly to the east of the extent of the confining unit boundary on the former PEO property. Based on the most recent data available (1996 and 1998 for TPH, and January 2003 for BTEX), elevated diesel-range hydrocarbon concentrations were observed with a maximum

concentration of 35 mg/L at direct-push location G. Gasoline-range hydrocarbon and ethylbenzene concentrations exceeding the preliminary screening levels were also observed in this area with maximum concentrations of 44.5 mg/L at direct push location B-9 and 1,500 mg/L at well MW-5, respectively.

# Eastern Portion of Phase III Study Area

 Although petroleum hydrocarbons were not analyzed for in the upper zone groundwater in the eastern portion of the Phase III study area, no VOCs or PAHs were detected in the upper zone groundwater.

# Phase II Study Area

- The only significant plume of contamination in the upper zone groundwater in the Phase II study area is PCP. Based on the fourth quarter 2003 groundwater data, PCP concentrations in this plume range from 0.61 µg/L to 2,100 µg/L and extend approximately 450 ft downgradient from the PCP mixing area. In November 2004, the overall size of the PCP plume had diminished and concentrations within the plume had decreased significantly with the previous maximum concentration decreasing to 624 µg/L. These decreases in PCP concentrations appear to result from a large-scale soil removal action in 2002 as well as two full-scale ISCO injection events within the PCP plume area. Historical PCP concentrations within the upper zone have been as high as 23,000 µg/L at well LW-11S.
- The Phase III RI results also indicate that separate plumes of diesel-range and gasoline-range petroleum hydrocarbons and VOCs are observed in the upper zone groundwater within and downgradient of the Phase II study area. These concentrations do not appear to originate in the tank farm areas and are likely related to the presence of PCP carrier oils (e.g., mineral spirits) as light non-aqueous phase liquid (LNAPL) and to the partitioning of these constituents into groundwater.
- Occasional observations of LNAPL have also been recorded for upper zone groundwater monitoring wells within the Phase II study area. These wells include OX-1S, OX-2S, OX-3S, LW-8S, and LW-11S and piezometer PZ-2. LNAPL thicknesses at these locations since the soil removal action have ranged from 0.04 to 0.37 ft. LNAPL occurring in this area appears to be related to activities performed in the former PCP mixing area and not related to LNAPL observed in the Main Terminal Tank Farm area. LNAPL presence is also related to seasonal groundwater fluctuations.
- PCP is detected in the lower zone groundwater within the Phase II study area, the southern portion of the Main Terminal Tank Farm area, and the western portion of the asphalt-paved road area at concentrations less than preliminary screening levels. This distribution of PCP concentrations in lower zone groundwater in this area reflects downgradient movement from a historically high PCP concentration area and the influence of recovery well RW-2. Detections of diesel-range petroleum hydrocarbons are observed in the lower zone groundwater in these areas at concentrations up to 3.1 mg/L.

# **Asphalt-Paved Road Area**

• No contaminants were detected in upper zone groundwater within the asphalt-paved road area.

# Loading Rack/Entrance Area

• No lower zone groundwater monitoring wells exist in the loading rack/entrance area of the Main Terminal.

# **Shoreline Wells**

• Groundwater results for the Willamette River shoreline wells indicate that, with the exception of chromium in wells LW-37D, LW-38D, and LW-39D and copper in well LW-37D, no concentrations exceeded the preliminary screening levels during the November 2004 event. Data for the first quarter 2005 (provided in its entirety in a separate deliverable) indicate that concentrations for all constituents are less than the preliminary screening levels in the shoreline wells. These data indicate that facility-related groundwater contaminants are currently reaching the river at concentrations below applicable screening level values. These groundwater concentrations will be confirmed through a full year of groundwater monitoring.

# **Site-Wide Observations**

- Metals concentrations in the lower zone are typically greater than in the upper zone and
  may be the result of reducing conditions in the lower zone enhanced by the presence of
  petroleum hydrocarbons.
- Except for a slight sheen and a slight to moderate mineral spirits-like odor during the first sampling of well B2 in August 1993, no NAPL or odors have been reported for the lower zone groundwater at the Terminal.
- Fluctuations in groundwater elevations in the upper zone reflect typical seasonal variability with seasonal lows during the fall months (October-November) and seasonal highs during the winter and early spring months (January-March).
- Comparison of the diesel- and gasoline-range TPH, benzene, and ethylbenzene concentrations with groundwater elevations indicate that groundwater concentrations in upper zone wells are likely influenced by seasonal fluctuations in groundwater levels. Lower zone groundwater elevations correlate with river stage fluctuations; however, any trend in groundwater concentrations in response to fluctuations in groundwater level or river stage is not apparent from the available data.

# Contaminant Fate and Transport: Soil

Contamination of soil throughout the Terminal appears to be a result of the release of hazardous substances directly onto the soil during operation of the Terminal. Within the former PCP mixing area, releases occurred during PCP formulation activities. Within the former Crosby & Overton area, releases

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occurred during lease operations and tank closure. In the Main Terminal Tank Farm area, releases occurred due to spills and possibly leaking along conveyance pipelines and/or with activities associated with bulk fuel storage. In the Bell Terminal Tank Farm area, although no releases have been documented, it appears releases may have occurred in the central portion of the Bell Terminal Tank Farm area near the east-west trending conveyance pipeline due to incidental spills, along the western property boundary outside the walls of the tank farm in an area that appears to have been used by operators of the adjacent property for storage, and on the eastern portion of the former PEO property (including the former locations of diesel ASTs). Within the eastern portion of the Phase III study area and the asphalt-paved road areas, the releases appear to be associated with current and/or historic road material. The elevated concentrations of contaminants in soil at the capillary fringe depth interval throughout the tank farm areas and in the Phase II area indicate that releases of hazardous substances to the ground surface were historical and that the substances released have had sufficient time to migrate downward and spread laterally along the capillary fringe. The partitioning of constituents in contaminated soil or LNAPL to groundwater has resulted in dissolved phase contamination. Stockpiled soil in the Phase I study area and PCP-impacted soil in the Phase II study area at the ground surface to the depth of the water table (approximately 13 ft BGS) has been removed and incinerated and disposed offsite. Concentrations of contaminants remaining in soil in this area are at levels that were calculated to be protective for migration to groundwater that ultimately discharges to surface water.

# Contaminant Fate and Transport: Groundwater

The presence of the same contaminants found in groundwater as in soil throughout the tank farm areas and the former PCP mixing area indicates that contaminants have partitioned from the soil and/or NAPL into the groundwater. Petroleum hydrocarbon plumes and PCP plumes found in the upper zone of the tank farm areas and the former PCP mixing area, respectively, appear to have migrated in the downgradient direction (west or southwest). For PCP, historical and recent concentrations of PCP in groundwater were used to evaluate potential contaminant migration pathways between the historical and recent monitoring periods. Currently, migration pathways for PCP are being controlled through the groundwater interim action (e.g. groundwater recovery) and the ISCO injections in the PCP plume areas. Potential historical contaminant migration to the Willamette River is being addressed during the RI/FS for the Portland Harbor Superfund Project. Historical groundwater quality data are not available for the tank farm areas.

In the Main Terminal Tank Farm area, the presence of contaminants in the lower zone groundwater in the western portion of the tank farm where the confining unit is discontinuous or absent, and the lesser presence of these contaminants in the lower zone groundwater in the eastern portion of the

tank farm where the confining unit is present, indicates that contaminants in the upper zone groundwater are migrating westward (downgradient) and mixing with the lower zone groundwater. The downgradient extent of the diesel-range and gasoline-range hydrocarbon plumes originating from the Bell Terminal Tank Farm area suggests that lateral movement of the contaminants is slow, which may be due to the low horizontal hydraulic gradient in this area, partitioning of these constituents from the dissolved phase onto organic matter, or attenuation processes (e.g., biodegradation and/or volatilization).

Vertical migration of contaminants from the upper zone groundwater to the lower zone groundwater seems to occur only in locations where the confining unit is discontinuous and/or absent (e.g., the western portion of the Main Terminal Tank Farm area, within and downgradient of the former PCP mixing area, and the western portion of the former PEO property to the west of the Bell Terminal tank farm area). This suggests that the silt layer over much of the western portion of the Main Terminal Tank Farm area and the Bell Terminal Tank Farm area is acting as an impermeable geologic/hydrogeologic boundary. Because the confining unit boundary on the former PEO property is estimated within the likely source area where the diesel ASTs were located on the eastern portion of the PEO property, the elevated groundwater concentrations in this area could reflect groundwater contamination resulting from direct releases to soil where the confining unit is not present or downgradient flow of contaminated groundwater from the upper zone across the confining unit boundary. However, in the latter case, concentrations would typically decrease instead of increase in the downgradient direction.

The storm drain located in the southern half of the Terminal and the backfill associated with the storm drain appear to affect groundwater flow and contaminant transport in the upper groundwater zone. The presence of the storm drain may partly explain the southerly components of upper zone groundwater flow in the Terminal area as groundwater flows toward the zone of higher hydraulic conductivity. The storm drain does not appear to fully penetrate the confining unit (where present) and, thus, is not thought to provide a vertical pathway for groundwater flow and contaminant transport to deeper aquifers, except beyond the extent of the confining unit. Groundwater samples collected from manholes in the storm drain and at the storm drain outfall in the river indicate that the storm drain has, in the past, acted as a preferential pathway for upper zone groundwater to the river. The groundwater intercept system was installed to eliminate the potential for upper zone groundwater to migrate through the storm drain to the river. The influence of the storm drain on groundwater quality will continue to be evaluated as part of the groundwater interim action. Additionally, implementation of full-scale *in situ* chemical oxidation (ISCO) technique for shallow groundwater and soil in and downgradient of the former PCP mixing area will continue as an interim remedial action to address migration of PCP contamination in groundwater from this area. The results from the July 2004 and January 2005 ISCO injections indicate that PCP

concentrations have been significantly reduced within the Phase II area and the extent of the PCP plume in the upper zone has been diminished.

The most critical potential exposure pathway at the Terminal is migration of contaminants via groundwater to surface water. However, as indicated by the analytical results for the groundwater samples collected from the Willamette River shoreline wells in November 2004, February 2005, and June 2005, facility-related groundwater contaminants are not currently reaching the river at concentrations above applicable screening level values. During the November 2004 event, only chromium was detected in shoreline wells LW-38D and LW-39D at concentrations exceeding the preliminary screening level, and only chromium and copper were detected in shoreline well LW-37D at a concentration exceeding the preliminary screening level. No constituent was detected at a concentration exceeding the preliminary screening levels in the shoreline wells during the February and June 2005 events. Therefore, even though there is a physical groundwater transport pathway from the upland areas of the terminal to the river, the data indicate that there is not a complete exposure pathway for migration of facility-related contaminants via groundwater to potential receptors in the Willamette River at concentrations that exceed applicable screening levels. Analytical results from future groundwater samples collected at the shoreline wells will be used to monitor the concentrations of groundwater contaminants that discharge to the Willamette River.

# **TABLE OF CONTENTS**

			<u>Page</u>
EXE	CUTI	VE SUMMARY	ii
1.0	INT	RODUCTION	1-1
	1.1	SCOPE AND OBJECTIVES	1-1
	1.2	REPORT ORGANIZATION	1-2
2.0	BAC	CKGROUND INFORMATION	2-1
	2.1	FACILITY DESCRIPTION	2-1
	2.2	SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND	2.1
		INTERIM ACTIONS	2-4
		2.2.1 Historical Environmental Investigations – Phase III Study Area	2-4
		2.2.1.1 1984 DEQ Site Inspection	2-5
		2.2.1.2 1986 Crosby & Overton Truck Washing Trough Remediation	2-5
		2.2.1.3 1989 Soil TPH Investigation	2-6
		2.2.1.4 1994 Unleaded Gasoline Spill/Groundwater and Soil Investigation	2-6
		2.2.2 Phases I and II Remedial Investigations and Interim Remedial Actions	2-6
		2.2.2.1 Former PCP Mixing Area and Warehouse	2-7
		2.2.2.2 Former Soil Stockpile	2-9
		2.2.2.3 Former Crosby & Overton Tank Area	2-10
		2.2.2.4 East Property	2-11
		2.2.2.5 Quarterly Groundwater Monitoring Events	2-13
		2.2.2.6 Groundwater Interim Action	2-13
		2.2.2.7 <i>In Situ</i> Chemical Oxidation Interim Action	2-15
		Bench Scale and Pilot Studies	2-15
		Full Scale Implementation	2-15
		2.2.3 Phase III Remedial Investigations	2-18
		2.2.3.1 Preliminary Evaluation	2-18
	2.2	2.2.3.2 Interim Subsurface Investigation	2-19
	2.3	REGULATORY SETTING	2-20
	2.4	FACILITY PERMITS AND REGULATORY COMPLIANCE	2-20
		2.4.1 Stormwater	2-20 2-22
		2.4.2 Wastewater	2-22
3.0		SICAL SETTING	3-1
	3.1	TOPOGRAPHY	3-1
	3.2	REGIONAL HYDROGEOLOGY	3-2
	3.3	REGIONAL HYDROGEOLOGY	3-3
	3.4 3.5	SURFACE WATER FEATURES CLIMATE AND METEOROLOGY	3-5 3-5
	3.3	CLIMATE AND METEOROLOGY	3-3
4.0		ID AND BENEFICIAL WATER USE EVALUATIONS	4-1
	4.1	LOCALITY OF THE FACILITY	4-1
		LAND USE EVALUATION	4-3
	4.3	BENEFICIAL WATER USE DETERMINATION	4-3
5.0	PHA	SE III REMEDIAL INVESTIGATION SAMPLING	5-1
	5.1	SOIL INVESTIGATION	5-1

xvi

12/20/05 \\Edmdata\wproc\231\009\132\PhIII RI 122005 Revised\PhIII RI\_Rpt\_Rev Dec 2005.doc

		5.1.1 Preliminary Evaluation	5-1
		5.1.2 Interim Subsurface Investigation	5-4
		5.1.3 Final Stage	5-5
	5.2	GROUNDWATER INVESTIGATION	5-8
		5.2.1 Temporary Well Points	5-8
		5.2.2 Permanent Monitoring Wells	5-10
		5.2.2.1 Upper Zone Monitoring Wells	5-12
		5.2.2.2 Lower Zone Monitoring Wells	5-13
		5.2.3 Well Development	5-14
		5.2.4 Water Level Measurements	5-14
		5.2.5 Groundwater Sampling	5-14
		5.2.5.1 Groundwater Chemical Analyses	5-15
		5.2.6 Survey	5-15
		5.2.7 Residual Waste Management	5-16
	5.3	QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES	5-16
	5.4	DATA VALIDATION	5-16
		5.4.1 Data Processing and Management	5-17
6.0	GEO	DLOGY AND HYDROGEOLOGY	6-1
	6.1	LOCAL GEOLOGY	6-1
	6.2	LOCAL HYDROGEOLOGY	6-2
		6.2.1 Upper Zone	6-3
		6.2.2 Confining Unit	6-3
		6.2.3 Lower Zone	6-4
		6.2.4 Deep Sand Unit	6-5
	6.3	UPPER ZONE HYDROGEOLOGIC CHARACTERISTICS	6-5
		6.3.1 Groundwater Flow And Seasonal Trends	6-6
		6.3.2 Hydraulic Parameter Estimates and Groundwater Velocities	6-7
	6.4	LOWER ZONE HYDROGEOLOGIC CHARACTERISTICS	6-8
		6.4.1 Groundwater Flow And Seasonal Trends	6-9
		6.4.2 River Stage Influence on Lower Zone Groundwater	6-10
		6.4.3 Hydraulic Parameter Estimates and Groundwater Velocities	6-12
	6.5	VERTICAL GROUNDWATER FLOW	6-12
	6.6	AQUIFER RECHARGE AND DISCHARGE	6-13
7.0	NAT	TURE AND EXTENT OF CONTAMINATION	7-1
	7.1	SOIL	7-3
		7.1.1 Selected Contaminants of Interest	7-3
		7.1.2 Contaminant Distribution	7-4
		7.1.2.1 Main Terminal Tank Farm Area	7-4
		7.1.2.2 Bell Terminal Tank Farm Area	7-7
		7.1.2.3 Loading Rack/Entrance Area of the Main Terminal	7-9
		7.1.2.4 Eastern Portion of the Phase III Study Area	7-10
		7.1.2.5 Asphalt-Paved Road Area	7-11
		7.1.2.6 Phase II Study Area	7-11
	7.2	GROUNDWATER	7-13

12/20/05 \\Edmdata\wproc\231\009\132\PhIII RI 122005 Revised\PhIII RI\_Rpt\_Rev Dec 2005.doc

		7.2.1	Selected Contaminants of Interest	7-13	
		7.2.2	Contaminant Distribution	7-15	
			7.2.2.1 Upper Zone Groundwater	7-15	
			7.2.2.2 Lower Zone Groundwater	7-21	
		7.2.3	Metals Evaluation	7-26	
		7.2.4	Contaminant Trends	7-27	
			7.2.4.1 Main Terminal Tank Farm Area	7-27	
			7.2.4.2 Bell Terminal Tank Farm Area	7-30	
			7.2.4.3 Loading Rack/Entrance Area of the Main Terminal	7-31	
			7.2.4.4 Eastern Portion of the Phase III Study Area	7-31	
			7.2.4.5 Asphalt-Paved Road Area	7-31	
			7.2.4.6 Phase II Study Area	7-32	
	7.3		RVATIONS OF NAPL, SHEENS, AND ODORS	7-34	
		7.3.1	Soil	7-34	
		7.3.2	Groundwater	7-35	
8.0	CON		AL SITE MODEL	8-1	
	8.1	SOUR	CE AREAS	8-1	
			Former PCP Mixing Area and Warehouse	8-1	
		8.1.2	Tank Farm Areas	8-2	
		8.1.3	Former Crosby & Overton Tank Area	8-3	
	8.2		RAL CONTAMINANT RELEASE AND TRANSPORT		
			HANISMS/PATHWAYS	8-4	
	8.3		SPECIFIC FATE AND TRANSPORT PROCESSES	8-6	
		8.3.1	PCP Mixing Area	8-7	
		8.3.2	Tank Farms	8-10	
		8.3.3	Crosby & Overton Tank Area	8-12	
9.0	SCO		FUTURE ACTIVITIES	9-1	
	9.1		E II/III GROUNDWATER MONITORING	9-1	
	9.2		NDWATER INTERIM ACTION	9-2	
	9.3		SCALE ISCO IMPLEMENTATION	9-2	
	9.4		CE CONTROL EVALUATION	9-2	
	9.5		ASSESSMENT	9-3	
	9.6	FEASI	BILITY STUDY	9-3	
10.0	PRO	POSED	SCHEDULE	10-1	
11.0	USE OF THIS REPORT				
12.0	REFERENCES 12-				

# **LIST OF FIGURES**

<u>Figure</u>	<u>Title</u>
1-1	Vicinity Map
1-2	Phase III Study Areas
2-1	Terminal Map
2-2	Stormwater Flow Route and Stormdrain System
2-3	Previous Investigation Areas and Phase III Study Area
2-4	PCP Mixing Area Excavation Boundaries and Summary of PCP Concentrations Remaining in Soil
2-5	Removal Boundaries and Verification Soil Sample PCB Results, Former Crosby & Overton Tank Area
2-6	Removal Boundaries and Verification Soil Sample cPAH Results, Former Crosby & Overton Tank Area
2-7	Phase II and Phase III RI Soil Sampling Locations
2-8	ISCO Injection Points July 12-16, 2004
2-9	Upper Zone PCP Concentrations in ISCO Injection Area June 2004
2-10	Upper Zone PCP Concentrations in ISCO Injection Area August 2004
2-11	Phase II and Phase III RI Groundwater Sampling Locations
2-12	Historical Aerial Photograph - 1939
2-13	Historical Aerial Photograph - Circa 1939
3-1	Regional Surficial Geology and Cross Section Location
3-2	Regional Geologic Cross Section
4-1	Locality of the Facility
4-2	Time Oil Northwest Terminal and Adjacent Properties
4-3	Zoning Map
4-4	Well Inventory Results
4-5	Water Rights – Time Oil Northwest Terminal and Vicinity
6-1	Cross Section Locations
6-2	Cross Section A-A'
6-3	Cross Section B-B'
6-4	Cross Section C-C'
6-5	Cross Section D-D'
6-6	Cross Section E-E'
6-7	Cross Section F-F'
6-8	Cross Section G-G'
6-9	Cross Section H-H'
6-10	Cross Section I-I'
6-11 6-12	Cross Section J-J' Cross Section K-K'
6-13	Cross Section L-L'
6-14	Groundwater Elevation Contours, Upper Zone, February 2004
6-15	Groundwater Elevation Contours, Upper Zone, November 2004
6-16	Seasonal Trends, Upper Zone and River, March 1997 – November 2004
6-17	Groundwater Elevation Contours, Lower Zone, February 2004
6-18	Groundwater Elevation Contours, Lower Zone, November 2004  Groundwater Elevation Contours, Lower Zone, November 2004
6-19	Seasonal Trends, Lower Zone and River, March 1997 – November 2004
6-20	Groundwater Vertical Gradients

12/20/05 \\Edmdata\wproc\231\009\132\PhIII RI 122005 Revised\PhIII RI\_Rpt\_Rev Dec 2005.doc

7 1	D' 1 D	T) ( 1	TT 1 1	<b>~</b>	•	C '1	005	CD	00
7-1	Diesel-Range	Petroleum	Hydrocarbon	Concentrations	ın	SOIL	0-0	) ## K	LTN.
, T	Diosoi italigo	1 Cu Oleum	11 y al O Cal O O II	Concentiations	111	DOIL	0.0	1111	S

- 7-2 Gasoline-Range Petroleum Hydrocarbon Concentrations in Soil 0-0.5 ft BGS
- 7-3 Benzo(a)pyrene Concentrations in Soil 0-0.5 ft BGS
- 7-4 Lead Concentrations in Soil 0-0.5 ft BGS
- 7-5 Zinc Concentrations in Soil 0-0.5 ft BGS
- 7-6 PCP Concentrations in Soil 0-0.5 ft BGS
- 7-7 Diesel-Range Petroleum Hydrocarbon Concentrations in Soil 1-1.5 ft BGS
- 7-8 Gasoline-Range Petroleum Hydrocarbon Concentrations in Soil 1-1.5 ft BGS
- 7-9 Benzo(a)pyrene Concentrations in Soil 1-1.5 ft BGS
- 7-10 Lead Concentrations in Soil 1-1.5 ft BGS
- 7-11 Zinc Concentrations in Soil 1-1.5 ft BGS
- 7-12 Diesel-Range Petroleum Hydrocarbon Concentrations in Soil 5-5.5 ft BGS
- 7-13 Gasoline-Range Petroleum Hydrocarbon Concentrations in Soil 5-5.5 ft BGS
- 7-14 Benzo(a)pyrene Concentrations in Soil 5-5.5 ft BGS
- 7-15 Benzene Concentrations in Soil 5-5.5 ft BGS
- 7-16 Lead Concentrations in Soil 5-5.5 ft BGS
- 7-17 Zinc Concentrations in Soil 5-5.5 ft BGS
- 7-18 PCP Concentrations in Soil 5-5.5 ft BGS
- 7-19 Diesel-Range Petroleum Hydrocarbon Concentrations in Soil Capillary Fringe and Below
- 7-20 Gasoline-Range Petroleum Hydrocarbon Concentrations in Soil Capillary Fringe and Below
- 7-21 Benzo(a)pyrene Concentrations in Soil Capillary Fringe
- 7-22 Benzene Concentrations in Soil Capillary Fringe
- 7-23 Ethylbenzene Concentrations in Soil Capillary Fringe
- 7-24 Lead Concentrations in Soil Capillary Fringe
- 7-25 Zinc Concentrations in Soil Capillary Fringe and Below
- 7-26 PCP Concentrations in Soil Capillary Fringe and Below
- 7-27 Diesel-Range Hydrocarbons in Groundwater, Upper Zone and Beyond Confining Unit Boundary October 2003
- 7-28 Diesel-Range Hydrocarbons in Groundwater, Upper Zone and Beyond Confining Unit Boundary November 2004
- 7-29 Gasoline-Range Hydrocarbons in Groundwater, Upper Zone and Beyond Confining Unit Boundary October 2003
- 7-30 Gasoline-Range Hydrocarbons in Groundwater, Upper Zone and Beyond Confining Unit Boundary November 2004
- 7-31 Benzene Concentrations in Groundwater, Upper Zone and Beyond Confining Unit Boundary October 2003
- 7-32 Benzene Concentrations in Groundwater, Upper Zone and Beyond Confining Unit Boundary November 2004
- 7-33 Ethylbenzene Concentrations in Groundwater, Upper Zone and Beyond Confining Unit Boundary October 2003
- 7-34 Ethylbenzene Concentrations in Groundwater, Upper Zone and Beyond Confining Unit Boundary November 2004
- 7-35 PCP Concentrations in Groundwater, Upper Zone and Beyond Confining Unit Boundary October 2003
- 7-36 PCP Concentrations in Groundwater, Upper and Beyond Confining Unit Boundary November 2004
- 7-37 Diesel-Range Petroleum Hydrocarbons in Groundwater, Lower Zone, October 2003
- 7-38 Diesel-Range Petroleum Hydrocarbons in Groundwater, Lower Zone, November 2004
- 7-39 Gasoline-Range Petroleum Hydrocarbons in Groundwater, Lower Zone, October 2003
- 7-40 Gasoline-Range Petroleum Hydrocarbons in Groundwater, Lower Zone, November 2004
- 7-41 Benzene Concentrations in Groundwater, Lower Zone, October 2003

7-42	Benzene Concentrations in Groundwater, Lower Zone, November 2004
7-43	Ethylbenzene Concentrations in Groundwater, Lower Zone, October 2003
7-44	Ethylbenzene Concentrations in Groundwater, Lower Zone, November 2004
7-45	PCP Concentrations in Groundwater, Lower Zone, October 2003
7-46	PCP Concentrations in Groundwater, Lower Zone, November 2004
7-47	Groundwater Concentrations, Nearshore Wells, Selected Analytes, 4 <sup>th</sup> Quarter 2004
7-48	Groundwater Concentrations, Nearshore Wells, Selected Analytes, 1st Quarter 2005
7-49	Diesel-Range Hydrocarbons, Selected Upper Zone Wells, Main Tank Farm Area
7-50	Gasoline-Range Hydrocarbons, Selected Upper Zone Wells, Main Tank Farm Area
7-51	Selected Constituents, Well LW-8S, Upper Zone, Main Tank Farm Area
7-52	Diesel-Range Hydrocarbons, Selected Lower Zone Wells, Main Tank Farm Area
7-53	Gasoline-Range Hydrocarbons, Selected Lower Zone Wells, Main Tank Farm Area
7-54	Selected Constituents, Well, LW-23D, Lower Zone, Main Tank Farm Area
7-55	Selected Constituents, Well LW-25D, Lower Zone, Main Tank Farm Area
7-56	Diesel-Range TPH vs. Groundwater Elevation, LW-20S and LW-20D, Main Tank Farm Area
7-57	Diesel-Range Hydrocarbons, Upper Zone Wells, Bell Terminal
7-58	Gasoline-Range Hydrocarbons, Upper Zone Wells, Bell Terminal
7-59	Selected Constituents, Well LW-32S, Upper Zone, Bell Terminal
7-60	Diesel-Range TPH vs. Groundwater Elevation, LW-30S and LW-30D, Bell Terminal
7-61	Selected Constituents, Well LW-7S, Upper Zone, Loading Rack/Entrance Area
7-62	PCP Concentrations, Selected Upper Zone Wells, April 1997 – November 2004
7-63	PCP Concentrations, Selected Lower Zone Wells, April 1997 – November 2004
7-64	PCP Concentrations and Groundwater Elevations, LW-4S, April 1997 – November 2004
7-65	PCP Concentrations and Groundwater Elevations, LW-11S, April 1997 – November 2004
7-66	PCP Concentrations, Groundwater Elevations, and River Stage, LW-11D, April 1997 –
	November 2004
8-1	Conceptual Site Model
8-2	PCP Groundwater Concentrations, Upper Zone, February 1991
8-3	PCP Groundwater Concentrations, Upper Zone, March-April 1997
8-4	PCP Groundwater Concentrations, Upper Zone, Spring 1999
8-5	PCP Concentrations in Groundwater, Upper Zone, February 2001
8-6	PCP Groundwater Concentrations, Lower Zone, March-April 1997
8-7	PCP Groundwater Concentrations, Lower Zone, Spring 1999
8-8	PCP Concentrations in Groundwater, Lower Zone, February 2001

# LIST OF TABLES

<u>Table</u>	<u>Title</u>				
2-1	Summary of Quarterly Groundwater Analyses, Time Oil Northwest Terminal				
2-2	Summary of Modifications to Quarterly Groundwater Analysis Program, Time Oil Northwest Terminal				
2-3	Groundwater Interim Action Operational History, Upper and Lower Water-Bearing Zones, Time Oil Northwest Terminal				
2-4	Summary of Storm Drain Manhole Locations Analytical Results, Time Oil Northwest Terminal				
2-5	Summary of Potentially Impacted Areas, Phase III Preliminary Evaluation, Time Oil Northwest Terminal				
5-1	Summary of Split Soil Sample Analytical Results, Phase III Remedial Investigation, Time Oil Northwest Terminal				
5-2	Boring Log and Soil Sample Summary, Phase III Remedial Investigation, Time Oil Northwest Terminal				
5-3	Summary of Split Groundwater Sample Analytical Results, Phase III Remedial Investigation, Time Oil Northwest Terminal				
6-1	Horizontal Hydraulic Gradients Upper and Lower Water-Bearing Zones, Time Oil Northwest Terminal				
6-2	Vertical Gradients March 1997-December 2003, Time Oil Northwest Terminal				
7-1	Fourth Quarter 2004 through Second Quarter 2005 Groundwater Data, Nearshore Wells, Time Oil Northwest Terminal				
7-2	NAPL, Sheen, and Odor Observations in Soil, Time Oil Northwest Terminal				
7-3	LNAPL Observations and Measurements in Groundwater, August 1993-October 2003, Time Oil Northwest Terminal				

# LIST OF APPENDICES

<u>Appendix</u>	<u>Title</u>
A	Phase III RI Well Completion Logs
В	Water Level Measurements
C	Detected Constituents - Soil Data Summary Tables
D	Detected Constituents – Groundwater Data Summary Tables
E	Phase III RI Soil Data, September 2003 -November 2004
F	Data Validation Reports
G	Laboratory Data Packages
H	Electronic Cumulative Detected Groundwater Data

# 1.0 INTRODUCTION

This report presents the results of the Phase III remedial investigation (Phase III RI) conducted at the Time Oil Northwest Terminal (Terminal) in Portland, Oregon (Figure 1-1). The Phase III RI was implemented in accordance with the State of Oregon's Hazardous Substance Remedial Action Rules (OAR 340-122), under the oversight of the Oregon Department of Environmental Quality (DEQ) under the voluntary cleanup program (VCP) agreement between Time Oil and DEQ, dated September 9, 1996 (DEQ No. WMCVC-NWR-96-07; DEQ 1996). The Phase III RI was conducted in accordance with the Phase III remedial investigation (RI) work plan, dated June 18, 2001 (Phase III RI work plan, Landau Associates 2001a).

The data collected for the Phase III RI focuses on the tank farm areas and other areas of the Terminal not covered by previous investigations; however, this report provides comprehensive documentation of the historical and current nature and extent of contamination at the Terminal using data from the Phase II RI and other relevant investigations to complete the RI portion of this project. Hot spots of contamination for the Terminal will be identified, in accordance with OAR 340-122-080, in conjunction with the evaluations for the human health and ecological risk assessments following selection of acceptable risk levels. The data presented herein are adequate and of sufficient quality to perform the human health and ecological risk assessments for the Terminal.

# 1.1 SCOPE AND OBJECTIVES

As described in the Phase III RI work plan (Landau Associates 2001a), the overall objective of the Phase III RI at the Terminal was to collect sufficient data from those areas of the Terminal for which no extensive investigations had previously been performed (i.e., the Phase III Study Area), such that, when evaluated in conjunction with previous site investigation data from other portions of the Terminal, the nature and extent of contamination within the Terminal boundaries could be determined, and the potential risks to human health and the environment could be assessed. To achieve these objectives, more than 250 soil samples and groundwater samples from a maximum of 82 wells were collected for chemical analyses on a quarterly basis. Also, groundwater levels were monitored quarterly at the monitoring well locations and subsurface soil conditions were logged at over 160 soil boring locations.

The Phase III study area, shown on Figure 1-2, was divided into the following subareas:

- Main Terminal Tank Farm area
- Bell Terminal Tank Farm area
- Historical loading racks for the tank farms/terminal entrance

- The eastern portion of the Phase III study area
- Asphalt Road area.

The extent of the Phases I/II study areas is also shown on Figure 2-1. The Phase I study area included the former soil stockpile that has since been removed and treated and disposed offsite. The Phase II study area encompasses the area where wood-treatment formulation activities were formerly located, including the former PCP mixing area and warehouse. These areas are described further in Section 2.1.

The objectives of the Phase III RI were to:

- Identify which hazardous substances, if any, had been released to the Phase III study area.
- Estimate the nature and extent of any soil and groundwater contamination identified within the Phase III study area.
- Obtain the hydrogeologic information needed to characterize the hydrogeologic system within the Phase III study area and to refine the hydrogeological conceptual site model.
- Obtain additional information needed to complete the conceptual site model, evaluate risk to human health and the environment, and conduct evaluations for a remedial action, if necessary. The conceptual model identifies the direction and migration of hazardous substances and identifies potential migration pathways and receptors based on current and reasonably likely future land and beneficial water use.

The Phase III RI did not include an investigation of Willamette River sediments. Collection of sediment samples at locations in the river adjacent to the Terminal are currently being collected as part of the RI/FS for the Portland Harbor Superfund Project.

# 1.2 REPORT ORGANIZATION

This report consists of two volumes. Volume I includes the main text, figures, and tables. Volume II includes the report appendices.

The remainder of Volume I is organized into the following sections:

- Section 2.0 Background Information. This section provides a description of the facility and its history, previous investigations conducted at the Terminal, and the regulatory framework of the RI process.
- Section 3.0 Physical Setting. This section provides a description of the physical setting of the Terminal, including the topography, regional geology and hydrogeology, surface water features, and climate and meteorology.
- Section 4.0 Land and Beneficial Water Use Evaluations. This section provides information regarding the locality of facility, and a summary of the land use and beneficial water use evaluations conducted during the Phase II RI, with information obtained during the Phase III investigation incorporated into the evaluation.

- Section 5.0 Phase III Remedial Investigation Sampling. This section describes the field investigative work and laboratory analyses performed during the Phase III RI.
- Section 6.0 Geology and Hydrogeology. This section presents the results of the Phase III RI and previous investigations with regard to the geologic and hydrogeologic conceptual model.
- Section 7.0 Nature and Extent of Contamination. This section describes the nature and extent of contamination at the Terminal based upon the Phase III RI and previous investigations, including a summary of preliminary screening levels.
- Section 8.0 Conceptual Site Model. This section identifies the conceptual site model for the Terminal including source areas and general and site-specific transport mechanisms and fate processes.
- Section 9.0 Scope of Future Activities. This section provides the scope of future planned activities to be conducted at the Terminal, including the continued implementation of the Phase II groundwater interim action, continued quarterly sampling of site monitoring wells, implementation of *in situ* chemical oxidation in the Phase II area, performance of a source control evaluation, and the Phase II/PhaseIII risk assessment and feasibility study.
- Section 10.0 Proposed Schedule. This section provides a proposed schedule for upcoming RI/FS activities.
- Section 11.0 Use of This Report.
- Section 12.0 References.

The appendices (Volume II) of this report include:

- Appendix A. This appendix contains summary information for soil explorations and monitoring wells and provides logs for explorations performed for this RI, the Phase II RI, and for historical wells installed prior to 1994, as available.
- Appendix B. This section provides water level measurements collected between 1996 to the present that were used to evaluate groundwater elevations and flow direction in this report.
- Appendix C. This appendix contains analytical data summary tables for detected constituents in soil for the Phase II RI and the Phase III RI, definitions of laboratory data validation qualifiers, and preliminary screening levels for soil.
- Appendix D. This appendix contains analytical data summary tables for detected constituents in groundwater for the October 2003 through November 2004 quarterly sampling events and from groundwater investigations conducted previously for the Phase III RI, definitions of laboratory data validation qualifiers, and preliminary screening levels for groundwater.
- Appendix E. This appendix contains Phase III RI soil data for September-October 2003 and October-November 2004 soil sampling events.

- Appendix F. This appendix provides data validation reports for Phase III RI soil and groundwater analyses not previously reported.
- Appendix G. This appendix provides laboratory data reports for the Phase III soil analyses not previously reported.
- **Appendix H.** This appendix provides cumulative groundwater data collected between April 1997 and November 2004 for wells monitored during quarterly groundwater sampling events. Because of the size of these tables, this appendix is provided only by CD with this report.

# 2.0 BACKGROUND INFORMATION

This section provides background information that was used in the evaluation of the nature and extent of contamination for the Phase III RI at the Time Oil Northwest Terminal. This section describes the Terminal and its operational history, summarizes available results from previous soil and groundwater investigations at the facility, outlines the regulatory framework of the RI process, and provides a summary of the current and historical facility permits and regulatory compliance.

# 2.1 FACILITY DESCRIPTION

The Northwest Terminal is a former bulk petroleum storage and transfer facility currently owned and operated by Time Oil. Time Oil ceased operations at the Terminal on October 31, 2001. From 1943 to 2001, the Terminal was operated by Time Oil as the Northwest Terminal petroleum products facility. Since operations began, the Terminal was used for the receipt, storage, and distribution of petroleum and petroleum-related products. Historically, Time Oil leased tank space to Crosby & Overton for storage of waste oils, and the Koppers Company leased tanks and property at the Terminal for the formulation and blending of pentachlorophenol (PCP)-containing wood treatment products.

The facility is located in Township 2 North, Range 1 West, Sections 34 and 35, in the industrialized Rivergate area of north Portland, Oregon (Figure 1-1). The Terminal is bordered to the east and south by heavy industrial complexes, to the north by heavy industrial property and Port of Portland undeveloped property, and to the west by the Willamette River (Figure 1-2). The Terminal is approximately 52 acres in size and is generally flat with an average land surface elevation of about 28 ft above mean sea level (MSL). The Terminal is enclosed by a terminal-wide chain link fence and access is through the main gate at the termination of Time Oil Road. Within the Terminal, there are several features that are distinguished by their historical uses, as shown on Figure 2-1. Of these areas, the following were included in the Phase III RI study area:

• Former Northwest Terminal tank farm areas where various petroleum products were stored and handled. Bulk product Terminal areas are located in the western and southern portions of the facility adjacent to the Willamette River. The tank farm areas include 21 aboveground storage tanks (ASTs) in the Main Terminal Tank Farm area and 10 ASTs in the Bell Terminal Tank Farm area. The storage tanks range from 3,000 to 80,000 barrels in size. In 1943 when the Terminal was first established, 12 of the original tanks were moved to the Main Terminal Tank Farm area from a location south of the current property. Between the mid to late 1950s and the late 1970s, additional tanks were added in both the Main Terminal Tank Farm area and in the Bell Terminal Tank Farm area bringing the areas to their current configurations. Most of the tanks appear to have been originally constructed on a sand or gravel base with perforated pipes (1½ -inch) extending radially from the footprint of the tank. After the base was put in place during construction, the pipes were used to pump in an asphalt-type material to seal the base of the tanks. Also, asphalt was packed around the base

of the tanks to prevent erosion. Currently, all tanks are empty except for tank 16804 in the Main Terminal Tank Farm area, which temporarily stores recovered water from the groundwater interim action wells RW-2 and HRW-1, and water collected from the groundwater intercept system in the east-west trending storm drain at SDM-1 prior to treatment at the onsite wastewater treatment system. At the Bell Terminal Tank Farm area, historical aerial photographs indicate that a strip of land approximately 80 ft wide along the entire western property boundary and outside the wall surrounding the Bell Terminal Tank Farm area was apparently used by occupants of the adjacent property for storage of equipment and possibly other unknown activities for approximately 25 years, ending in about 2000.

- Former butane and aviation gasoline storage areas located to the southeast of the Terminal office. These areas include two ASTs for storage of aviation gasoline and one AST for butane storage. Currently, all tanks are empty.
- Former petroleum transfer and receipt facilities that include above-and below-ground piping; product receipt facilities via rail, truck, and vessel; and product distribution facilities via truck and rail (loading racks), and via marine vessels (a 380-ft dock in the Willamette River). A former rack for loading trucks is located just west of the Terminal office. A former loading rack for rail transfer and receipt is located at the terminus of the rail spur to the east of the Terminal office. A former loading rack for the Bell Terminal Tank Farm area is located at the eastern side of the Bell Terminal Tank Farm area. Historically in these areas, product was transferred from the railcar, truck, or vessel to the aboveground tanks through pipelines located near each of the receipt/distribution locations. None of these areas are currently in use.
- Wastewater treatment system located to the north of the Terminal office. The wastewater treatment system (WWTS) is used to treat Terminal stormwater runoff for the industrial portions of the Terminal; investigation wastewater (e.g., development and purge water from monitoring and recovery wells); and remediation wastewater (e.g., groundwater from the groundwater interim action system) before discharge to the sanitary sewer line along Time Oil Road under permit with the City of Portland (COP). Stormwater routed to the WWTS originates from former industrial areas of the main part of the Terminal, including the former loading rack along the rail spur, the former truck loading rack, the former valve pit on the vessel dock, and other former valve areas. Influent and effluent sampling results are documented in quarterly self-monitoring reports (SMRs) to the COP, conducted according to the permit requirements.
- Form drain lines consisting of the main line running east-west along the length of the Terminal about 160 ft north of the southern property boundary. The stormwater collection system for the Phase I stockpile was abandoned or removed following completion of the stockpile removal action, as documented in the Phases I/II removal actions completion report (Landau Associates 2003a). Stormwater from the Terminal entrance area, the low topographic area east of the rail spur, and the East Property is collected into the main storm drain line for discharge into the Willamette River (Figure 2-2). In the fall of 2002, a groundwater intercept system was installed within the east-west trending storm drain to capture groundwater infiltrating into the concrete storm drain line between the two stormwater manholes located south of the horizontal recovery well (HRW-1). Installation activities are documented in the Fourth Quarter 2002 Groundwater Monitoring and Groundwater Interim Action Status Report (Landau Associates 2003b). Summaries of stormwater treatment and sampling are provided in the quarterly groundwater monitoring reports for the Terminal.

Stormwater sampling results are documented in annual discharge-monitoring reports (DMRs) to the COP, conducted according to the permit requirements.

- Subsurface utilities consisting of thousands of feet of pipeline underlying the facility and adjacent areas, including public utilities (e.g., electrical and water) and private utilities (e.g., hydrant lines). All product lines were flushed and cleaned upon cessation of operations at the Terminal.
- Entrance, former office, warehouses, and equipment maintenance area located in the northwest portion of the facility.
- **Dock** extending approximately 380 ft into the Willamette River from the terminal. During the period of Terminal operation between 1943 and 2001, the dock was used for the mooring of tanker ships while transferring petroleum products to pipelines located on the dock. No spills or releases have been documented or reported during the overwater activities. The dock is currently not in use.

Other features within the Terminal shown on Figure 2-1 that are currently being investigated or have been previously investigated and, therefore, were not included in the Phase III RI are:

- Former PCP mixing area and warehouse where specialty wood treating products containing PCP in various formulations (typically with petroleum-based carriers) were blended and stored for offsite shipment from 1967 to 1984 under an agreement with the Koppers Company. The former PCP mixing area is located in the approximate center of the Terminal, and includes the former PCP warehouse and the area south of the warehouse (formerly occupied by various mixing and storage tanks that were removed by 1982). During September through November 2002, soil removal action activities were conducted within the former PCP mixing area and associated areas. These activities included the demolition of the former PCP warehouse and the removal of approximately 6,400 yd³ of PCP-impacted soil from the former PCP mixing area. Removal activities are documented in the Phases I/II removal actions completion report (Landau Associates 2003a).
- Former Crosby & Overton tank area located directly south of the former PCP mixing area where waste oils were previously stored in two ASTs from 1974 to 1989 through a lease to Crosby & Overton. The tanks have since been removed from this area. Another AST (38009), removed during Phases I/II removal actions, was established in 1989 as a bioreactor during soil treatment activities for the former soil stockpile. Remedial action activities were conducted within the former Crosby & Overton tank areas in late 2002. Activities included the removal of 819 tons of polychlorinated biphenyls (PCB) and carcinogenic polycyclic aromatic hydrocarbons (cPAH)-impacted soil. Removal activities are documented in the Phases I/II removal actions completion report (Landau Associates 2003a).
- Former soil stockpile area (Phase I RI area) where approximately 3,600 yd<sup>3</sup> of soil that was excavated from the former PCP mixing area in 1989 or was transferred from the East Property during interim removal actions in 1996-1997 was temporarily located. The stockpile was located southwest of the former PCP mixing area and north of an inactive soil treatment area. The former stockpile was removed during Phase I/II soil removal actions conducted in 2002. Stockpile removal activities are documented in the Phase I/II removal actions completion report (Landau Associates 2003a).

• East Property area located in the eastern portion of the facility is a currently and historically undeveloped area. A remedial action for the East Property resulted in the removal and disposal of 1,732 tons of PAH-impacted soil (Landau Associates 2003c). A conditional No-Further-Action (NFA) determination was granted to Time Oil by DEQ on November 24, 2003 (DEQ 2003a).

Investigations associated with these areas are discussed in further detail in the following sections.

Known or documented spills within the Main Terminal Tank Farm area based on Time Oil or DEQ records are summarized below. Subsequent investigations conducted in these areas to define any contamination associated with the spills are described in Section 2.2. A stormwater pollution control plan was prepared for the Terminal in December 15, 2000 and revised in August 2002 (Landau Associates 2002b).

Date	Material(s) Released	Volume Spilled (gallons)	Spill Surface (gravel, asphalt, sewer)	Action Taken (yes /no)
1975	Diesel	unknown	Soil in bermed area	Yes - Product recovery and soil removal
1990	Ethanol	~500 gallons	Soil in bermed area	Yes - Product and groundwater recovery
1994	Unleaded Gasoline	1,300 gallons	Soil in bermed area	Yes - Product recovery, soil vapor extraction test, and long-term groundwater monitoring
1999	Ethanol	2,479 gallons (suspected)	Subsurface soil	Yes - Installed recovery well and conducted groundwater monitoring; no product ever observed

# 2.2 SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND INTERIM ACTIONS

This section summarizes the history of previous environmental site investigations and interim actions, including activities conducted under the Phase II RI, and previous investigations within the Phase III study area.

### 2.2.1 HISTORICAL ENVIRONMENTAL INVESTIGATIONS – PHASE III STUDY AREA

Beginning in 1984, a series of environmental investigations were conducted to evaluate the potential for soil and groundwater contamination due to former operations at the Terminal. These investigations included a site inspection by DEQ in 1984, removal of the Crosby & Overton truck-washing trough in 1986, test pit explorations near the Crosby & Overton truck-washing trough in

1989, and a groundwater and soil investigation conducted in 1994 in response to an unleaded gasoline spill in the Main Terminal Tank Farm area. These investigations are briefly discussed below.

# 2.2.1.1 1984 DEQ Site Inspection

As part of a DEQ site inspection in 1984, eight soil samples were collected in the Main Terminal Tank Farm area, one sample was collected in the former PCP mixing area, one sample was collected in the former Crosby and Overton tank area, and two samples were collected in the Bell Terminal Tank Farm area (DEQ 1985), as shown on Figure 2-3. Each sample was a composite of three depth intervals: ground surface, 1 ft below ground surface (BGS), and 2 to 3 ft BGS. The samples were analyzed for lead (EP toxicity), base-neutral semivolatiles, pesticides, and PCBs. Concentrations of these constituents were nondetect or at low concentrations, except in the central portion of the Main Terminal Tank Farm area where concentrations of PAH constituents (e.g., fluorene, phenanthrene, and anthracene) ranged from 13 mg/kg to 105 mg/kg. Also, at the locations in the former PCP mixing area and former Crosby & Overton tank area, concentrations of PCP were 1,820 and 515 mg/kg and concentrations of tetrachlorophenol were 71 and 12 mg/kg. No constituents were detected in the soil samples collected from the Bell Terminal Tank Farm area.

# 2.2.1.2 1986 Crosby & Overton Truck Washing Trough Remediation

In 1986, gravel used by Crosby & Overton for a truck-washing trough in the Bell Terminal Tank Farm area was excavated and the trough liner was removed and disposed at a private contractor facility (Crosby & Overton 1986). Two confirmation samples collected from the base of the excavation indicated oil and grease concentrations of 113 mg/kg and 30 mg/kg, respectively. The excavation was backfilled with clean fill material. In 1989, soil in the area of the truck-washing trough was sampled. The sample results indicated elevated levels of petroleum hydrocarbons (6,170 mg/kg). Base-neutral semivolatiles, metals, and PCBs were also analyzed, but were either present at concentrations less than the laboratory reporting limits (i.e., nondetect) or detected at low concentrations. In May 1989, about 300 yd<sup>3</sup> of soil was excavated from the truck-washing trough area by Crosby & Overton and disposed at St. Johns Landfill. A composite soil sample was collected from the east wall, the bottom, and the west wall of the excavation, and analyzed for total petroleum hydrocarbons (TPH). The TPH sample result was 15 mg/kg. The area was backfilled with clean fill from an onsite location (Crosby & Overton 1989). The location of the former Crosby & Overton truck-washing trough is shown on Figure 2-3.

# 2.2.1.3 1989 Soil TPH Investigation

In June 1989, visibly impacted soil was encountered during excavation of soil planned for use as fill for the excavated area within the former PCP mixing area. In response, 14 test pits were excavated and soil and groundwater samples were collected by ECOVA. Twelve of the test pits were located within the Phase III study area (specifically, near the former butane storage area), as shown on Figure 2-3. A total of 13 soil samples and 4 groundwater samples were collected from this area and analyzed for total TPH by infrared scan. Soil TPH concentrations ranged from 174 mg/kg to 9,002 mg/kg (ECOVA 1989). TPH was not detected in the groundwater samples. Information regarding the depth of the test pits and samples is not available.

# 2.2.1.4 1994 Unleaded Gasoline Spill/Groundwater and Soil Investigation

In 1994, in response to an unleaded gasoline spill in the Main Terminal Tank Farm area, five groundwater monitoring wells (N, O, P, Q, and R) were installed in and downgradient of the release area (Figure 2-3). Also, Time Oil conducted a soil vapor extraction test within the shallow soil in this area. Soil samples from the well borings indicated that soil from shallow wells N, P, and Q showed evidence of contamination by gasoline-range and diesel-range petroleum hydrocarbons. The soil at the top of the upper water-bearing zone (upper zone) in well Q exhibited the highest gasoline-range concentration (210 mg/kg) and the highest diesel-range concentration (16,430 mg/kg) (Landau Associates 1994). Water levels and product thickness (when observed) in these wells are monitored as part of the Phase II RI quarterly groundwater sampling events. Light non-aqueous phase liquid (LNAPL) has been observed intermittently at wells N, P, and Q since July 1997.

# 2.2.2 Phases I and II Remedial Investigations and Interim Remedial Actions

In addition to the soil and groundwater investigations conducted between 1984 and 1996, two remedial investigations were conducted at the Terminal from 1996 through 1999. These included a Phase I RI focused on the former soil stockpile area (Figure 2-1) and a Phase II RI focused on the former PCP mixing area and the former Crosby & Overton area (Figure 2-1). Investigations were also conducted for 21 acres of property located along the easternmost portion of the Terminal (referred to as the East Property), as shown on Figure 2-1. Additionally, in 2002, soil removal actions were completed for the soil stockpile, the former PCP mixing/warehouse areas, the former Crosby & Overton area, and on the East Property. Summaries of the investigations and remedial actions are included in the following sections. Further information regarding these investigations can also be found in the Phase I RI report (Landau Associates 1997a), the Phase II RI report (Landau Associates 2001b), the East Property

predevelopment investigation (EPPI) results report (Landau Associates 2001c), the Phases I/II removal actions completion report (Landau Associates 2003a), and the East Property soil remedial action completion report (Landau Associates 2003c).

# 2.2.2.1 Former PCP Mixing Area and Warehouse

The previous sampling events conducted in and adjacent to the former PCP mixing area and warehouse included the following:

- 1984 to 1989 Several soil sampling and remediation events were conducted within the former PCP mixing area and below the former PCP warehouse during this period. The main focus of the historical investigations was to identify the extent of PCP contamination within and adjacent to the former PCP mixing area resulting from historical use of these areas for formulation of wood treatment products. In 1989, approximately 3,000 yd³ of soil was excavated from this area and placed into the current soil stockpile, as described earlier. Soil PCP data from the historical sampling events, containing only data representing soil concentrations remaining within the former PCP mixing area after the 1989 excavation, are included on Figure 2-4.
- Phase II RI Conducted in fall 1996 and spring 1997, the Phase II RI included the following activities:
  - Soil Investigations: sampling and analyses of soil from 45 shallow soil borings and cone
    penetrometer test (CPT) explorations, 5 surface soil samples, 25 new shallow and deep
    monitoring and recovery well borings, and 2 dust samples from the rafters of the former
    PCP warehouse.
  - Groundwater Investigations: sampling and analyses of groundwater during an initial groundwater screening event in October 1996 and from selected wells in March 1997, sampling and analysis of groundwater using direct-push methods during February 1998 and February through April 1999, drilling and installation of four shallow and five deep monitoring wells and two recovery wells (one shallow and one deep) during February through April 1999, quarterly water quality sampling and analyses from March 1997 to the present, aquifer testing in May through June 1999, and installation of a third recovery well in November 1999.
  - Abandonment of five shallow wells and one well point.
  - Land use and beneficial water use evaluations.
- Phase II Supplemental Sampling In September 2001, supplemental soil sampling was conducted within and adjacent to the former PCP mixing area and former PCP warehouse to evaluate the extent of soil contamination and to address data gaps identified by DEQ in its comments on the Phase II RI report (DEQ 2000a). Soil samples were collected from 15 soil borings in and around the former PCP mixing area. Sample results for soil remaining after the removal action, including results from this event, are included on Figure 2-4.
- Pre-Removal Investigation (PRI) In August 2002, soil was collected and analyzed from the following: 1) three locations in the area previously identified as "clean fill" or overburden

from the 1989 excavation within the former PCP mixing area to determine whether this material could be reused as backfill following the removal action, 2) seven locations near the perimeter of the proposed excavation to provide additional data coverage, and 3) five locations where PCP concentrations were expected to range between 5 and 20 mg/kg to demonstrate that groundwater concentrations would not be adversely impacted by residual soil PCP concentrations of 5 mg/kg or less, if left in place at the completion of the removal action. PCP results for the soil remaining after the removal action, including samples from this event, are shown on Figure 2-4. The results for the groundwater protection evaluation demonstrate that use of 5 mg/kg as a cleanup target for the soil removal action is protective of surface water receiving groundwater migrating from the former PCP mixing area. Detailed results for the PRI are provided in a technical memorandum prepared by Landau Associates in September 2002 (Landau Associates 2002c).

During the fall of 2002, the PCP warehouse was demolished and PCP-impacted soil from the former PCP mixing area and adjacent area to the south and from beneath the footprint of the former PCP warehouse was excavated for offsite incineration and disposal. The removal action work plan required the soil to be designated into three types for proper handling, including "clean" overburden soil, "impacted" soil, and "high PCP-impacted" soil. The extent of the excavation was further divided into three excavation depths or tiers to minimize sloughing of clean ground surface and sidewall soil into the excavation, to limit the need for shoring, and to allow for reasonable segregation of PCP-impacted soil and the clean fill. These depths included the 0 to 0.5 ft BGS, 5 to 10 ft BGS, and 10 to 13 ft BGS tiers. PCP-impacted soil was removed to a maximum depth of 13 ft BGS, the approximate depth of the water table at the time of excavation. Because of limitations associated with excavation below the groundwater table, this was the maximum depth of excavation. Approximately 1,700 yd<sup>3</sup> of clean overburden soil was removed from the excavation, stockpiled, and ultimately used as backfill for the excavation. The soil removal activities resulted in the excavation of approximately 6,400 yd<sup>3</sup> of PCP-impacted soil, including approximately 90 yd<sup>3</sup> of high PCP-impacted soil from beneath the southwest corner of the former PCP warehouse. The PCP-impacted material was incinerated and disposed at the Swan Hills Treatment Center in Swan Hills, Alberta, Canada.

Following the completion of the *in situ* soil removal activities, soil verification samples were collected from the base and the sidewalls of the excavation to document PCP concentrations remaining in soil. A total of 18 sidewall and 8 base of excavation verification samples were collected to represent PCP concentrations remaining in soil within the former PCP mixing area at completion of the removal action. Figure 2-4 shows the boundaries of the excavation and PCP concentrations remaining in soil following the removal action.

PCP concentrations for the soil verification samples collected from the 0 to 5 ft BGS tier and 5 to 10 ft BGS tier were all less than the removal target of 5 mg/kg, as shown on Figure 2-4. All of the final verification sample PCP results collected from the western and southwestern portions of the base of

excavation (10 to 13 ft BGS) exceeded the 5 mg/kg target with PCP concentrations up to about 45 mg/kg. Removal action activities and documentation are provided in the Phases I/II removal actions completion report (Landau Associates 2003a).

# 2.2.2.2 Former Soil Stockpile

As discussed in the previous section, environmental investigations and removal actions conducted by and for Time Oil since 1984 resulted in the 1989 excavation of approximately 3,000 yd<sup>3</sup> of PCP-impacted soil from the former PCP mixing area. The excavated soil was stockpiled onsite in a bermed and lined area southwest of the mixing area and north of the former soil treatment (bioremediation) area (Figure 2-1). The stockpile was covered to minimize dust generation and contact with precipitation, and to minimize exposure to PCP-impacted soil by human and ecological receptors. Additional soil samples were collected for PCP analyses in 1989 from within the area where excavated soil was to be stockpiled and within the soil treatment area (ECOVA 1991). All sample results were reported as nondetect.

In 1990, eight samples were collected from the soil stockpile for PCP analyses; the eight samples were composited into two samples for dioxin/furan analysis

For the Phase I RI in September 1996, soil samples were collected from 10 borings in the soil stockpile (Landau Associates 1997a). Samples collected at each location were composited over the full depth of the stockpile, ranging from about 3 to 14 ft BGS. The soil samples were analyzed for semivolatile organic compounds (SVOCs), chlorinated phenols, TPH, priority pollutant metals, and volatile organic compounds (VOCs). Two samples were also analyzed for dioxins and furans; the sample with the highest PCP concentration was analyzed for PCP by the toxicity characteristics leaching procedure (TCLP). More detailed information on the results for the 1990 sampling and the Phase I RI was provided in the Phase I RI report (Landau Associates 1997a). In the fall of 1996, Time Oil upgraded the management of the stockpile to incorporate a new cover system and improved stormwater collection system (Landau Associates 1996). An additional 600 yd³ of PCP-contaminated soil was added to the stockpile in the fall of 1996 and fall of 1997, with DEQ's approval, following interim removal actions on the undeveloped eastern portion of the property and investigation activities for the Phase II RI. An additional 10 yd³ of soil from well drilling activities for the Phase II RI were added to the stockpile in August 1999.

In May 2001, soil samples were collected from 18 locations in the soil stockpile to determine the pre-removal soil concentrations. The soil samples were analyzed for SVOCs, metals, dioxin and furan compounds, biological parameters, and soil physical parameters. PCP was considered to be the indicator compound for the soil stockpile and the remaining constituents were evaluated for purposes of profiling the soil for disposal. Detailed results are provided in the Phase I FS (Landau Associates 2001d).

In the fall of 2002, in conjunction with the *in situ* soil removal of PCP-impacted soil from the former PCP mixing area (as discussed in Section 2.2.2.1), the soil stockpile was incinerated and disposed at the Swan Hills Treatment Center in Swan Hills, Alberta, Canada. The soil removal activities resulted in the removal of approximately 2,400 yd<sup>3</sup> of PCP-impacted soil from the stockpile area. (The soil stockpile was volumetrically reduced from about 3,600 yd<sup>3</sup> to about 2,400 yd<sup>3</sup>, likely due to compaction from construction equipment used on the stockpile and longer-term settlement since original construction. The total mass of the stockpile had not changed since 1999.) Around this time, equipment in the former soil treatment area was also decontaminated and removed from the Terminal for reuse.

Following the removal of the soil stockpile, soil verification samples were collected beneath the footprint of the former soil stockpile. Results for seven soil samples represent concentrations of PCP in soil remaining following the removal activities. Figure 2-5 presents the verification sampling locations and final PCP concentrations. Final soil PCP concentrations ranged from nondetect to 1.46 mg/kg. Dioxin/furan and metals analysis were also performed at two of the locations (SP-1-CONF and SP-3-CONF); the analytical results ranged from 13.7 nanograms per kilogram [ng/kg (SP-1-CONF)] to 1,135.56 ng/kg (SP-3-CONF) [as total equivalency quotient (TEQ)]. Concentrations of the six metals analyzed (arsenic, chromium, copper, lead, nickel, and zinc) ranged from nondetect to 354 mg/kg (zinc) with the highest concentrations occurring at sample location SP-3-CONF. Removal activities are documented in the Phase I/II removal actions completion report (Landau Associates 2003a).

# 2.2.2.3 Former Crosby & Overton Tank Area

From 1974 to 1989, two ASTs (5006 and 10002; shown on Figure 2-1) were leased from Time Oil by Crosby & Overton for storage of materials generated from offsite projects. Crosby & Overton reportedly provided services to collect and store waste oils from separators, oil slop tanks, ship tank cleaning, and related tasks.

Analytical results from investigations conducted in the Crosby & Overton tank area between 1987 and 1989 showed elevated PCB concentrations in soil associated with waste oil releases that occurred historically from the tanks and led to soil removal in this area.

In 1997, as part of the Phase II RI, soil samples were collected from 13 borings and 2 well boreholes within the Crosby & Overton tank area. The Phase II RI sample results indicated concentrations of PCBs ranging from less than 1 mg/kg to 16 mg/kg and PAHs ranging from less than 1 mg/kg to 67 mg/kg in the upper 6 inches of soil. The occurrence of PAHs in this area appears to be from the presence of asphalt-containing tank foundations and, to possibly a lesser extent, from the presence of historical asphalt-containing roadbed material, based on historical aerial photographs.

In 2002, in conjunction with the removal action conducted within the former PCP mixing area, soil removal activities were also conducted within the Crosby & Overton tank area. Removal activities consisted of excavating soil from depths of 0.5 to 2.5 ft BGS from the Crosby & Overton Tank Farm area. Figures 2-5 and 2-6 show the final excavation extents and depths for soil removal within the tank area. A total of 819 tons of soil were removed from the Crosby & Overton tank area for thermal treatment and disposal at the TPS Technologies, Inc. facility in Lakewood, Washington. Following soil removal activities, verification sampling was conducted within the removal areas. A total of six samples document final concentrations remaining in soil at the base of excavation. Sample results for the excavated areas for total PCBs and selected cPAHs are shown on Figures 2-5 and 2-6, respectively. Soil removal activities were documented in the Phases I/II removal actions completion report (Landau Associates 2003a).

# 2.2.2.4 East Property

In 1996-1997, Time Oil conducted a limited investigation of the East Property to identify, remove, and dispose of PCP-related wastes that originated from PCP formulation activities conducted within the former PCP mixing area from 1967 to 1984. The wastes were located in and adjacent to a topographic low (referred to as the former drum area, Figure 2-1) in and adjacent to a small stockpile area, and in several other isolated locations on the East Property. Removal activities consisted of removal of over 100 55-gallon drums and approximately 200 yd<sup>3</sup> of soil and debris from the former drum area. In addition, approximately 300 yd<sup>3</sup> of soil and other debris found in a small stockpile and several other localized areas with stressed vegetation were removed. Confirmation samples collected from each of these areas indicated that PCP-impacted soil was successfully removed to concentrations below U.S. Environmental Protection Agency (EPA) Region 9 preliminary remediation goals (PRGs) for residential soil and that soil impacted by other constituents (e.g., metals) was removed from each area to concentrations below the PRGs for industrial soil, and, in some areas, to below PRGs for residential soil.

Also, as part of the 1996-1997 investigation and interim removal activities, soil characterization samples were collected from the topographic mound (Figure 2-1). A few of the topographic mound soil samples contained detectable levels of PCP and PAHs. The concentrations of PCP and PAHs detected in all of the samples were less than the PRGs for industrial soil and some of the samples were also below the PRGs for residential soil. With concurrence from DEQ, the 1996-1997 removal action on the East Property is considered to be complete, and no further action in those areas is necessary (DEQ 1998a).

In March 1997, as part of the Phase II RI for the Terminal, two soil borings and four monitoring wells (LB-121, LB-122, LW-101S, LW-102S, LW-103S, and LW-104S) were completed within the East Property. The monitoring wells were installed to monitor groundwater concentrations in the areas where

PCP was observed in the soil. The soil borings and monitoring wells were also used to establish site-specific soil and groundwater background concentrations for the Terminal. The monitoring wells were placed on a quarterly sampling schedule until May 1998 when sampling was reduced to an annual basis for a reduced set of constituents. Sampling results for the monitoring wells were nondetect or detected at concentrations below DEQ levels of concern, demonstrating that there was no migration of contaminants from soil to groundwater in this area; the results are provided in quarterly groundwater monitoring reports for the site. Monitoring wells LW-101S through LW-104S were abandoned in August 2003 following the remedial action for the East Property.

In 2000-2001, investigations were conducted on the East Property to evaluate whether hazardous substances were present in soil and groundwater at concentrations that would require additional action in advance of potential lease or sale of the property by Time Oil and to identify soil removal areas and the extent of cPAH contamination. Using DEQ risk assessment screening methods (DEQ 1999, 2000b) and a statistical evaluation of the soil data to demonstrate compliance with DEQ's soil cleanup levels (SOCLEAN) for industrial soil (OAR 340-122-045), seven cPAH compounds were identified as chemicals of potential concern (COPC) or chemicals of potential ecological concern (CPEC) (COPCs/CPECs) for the surface soil, These compounds included: benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(k)fluoranthene, and chrysene. No COPCs/CPECs were identified in subsurface soil at concentrations exceeding the SOCLEAN levels for industrial soil. Sixteen soil removal areas, located mainly adjacent to historical and current roads, were identified as having surface soil with at least one of the five retained COPCs/CPECs at concentrations above the SOCLEAN levels for industrial soil. The presence of cPAHs in soil on the East Property appeared to be related to historical road oiling as documented in historical photographs from the late 1960s through 1970s. A remedial action plan for the East Property (Landau Associates 2002d) was implemented following DEQ's approval (DEQ 2002) during the fall of 2002.

The remedial action for the East Property included the removal of approximately 1,732 tons of soil for thermal treatment and disposal at TPS Technologies, Inc., in Portland, Oregon. In addition, approximately 90 tons of mixed asbestos-containing material and soil were removed and disposed at the Wasco County Landfill in The Dalles, Oregon. As part of the remedial action activities, a total of 81 verification samples were collected from the 16 soil removal areas. The verification sample results were used to indicate that remedial action objectives were met through performance of a statistical evaluation for comparison to the SOCLEAN levels (90 percent upper confidence limit on the true population mean). The results from the East Property investigations and the remedial actions are provided in the EPPI results technical memorandum (Landau Associates 2001c) and the East Property remedial action completion

report (Landau Associates 2003c). DEQ granted a conditional NFA determination for the East Property in a letter dated November 24, 2003 (DEQ 2003a). The NFA determination is contingent upon industrial site uses limiting suitable habitat to sensitive ecological receptors. An equitable servitude and deed restriction has been recorded on the property.

## 2.2.2.5 Quarterly Groundwater Monitoring Events

Quarterly groundwater monitoring events were initiated as part of the Phase II RI in March 1997. In total, 31 quarterly events have been conducted between March 1997 and November 2004 as part of the Phase II RI activities. Since the January 1998 sampling event, quarterly data have been provided to DEQ in quarterly groundwater monitoring reports. Sampling of the Phase III RI monitoring wells began with the fourth quarter 2003 groundwater sampling event and has continued on a quarterly basis to date. For this report, only one quarter of data, the fourth quarter 2004 data collected in November 2004, is available for the wells installed in October-November 2004. A summary of analyses conducted for each monitoring location since monitoring began is provided in Table 2-1. Groundwater level measurements conducted during the quarterly events are provided in Table B-1. Modifications to the sampling program approved by DEQ are summarized in Table 2-2. The fourth quarter 2004 groundwater sampling event conducted in November 2004 consisted of sampling 23 upper zone wells and 27 lower water-bearing zone (lower zone) wells. Groundwater sampling locations are shown on Figure 2-7.

### 2.2.2.6 Groundwater Interim Action

To prevent further migration of PCP in upper zone and lower zone groundwater at the Terminal, a groundwater interim action was implemented. The system consists of two groundwater extraction wells, a horizontal well (HRW-1) in the upper zone and a vertical well (RW-2) in the lower zone, and a groundwater intercept system in the east-west trending storm drain at the manhole closest to the Willamette River (SDM-1). Recovery well locations and the storm drain are shown on Figure 2-7.

Pumping within the lower zone from recovery well RW-2 began in October 2000. Since startup of recovery well RW-2, with the exception of periodic shutdowns for system maintenance, groundwater has been extracted continuously from the lower zone. Through December 2004, approximately 16 million gallons of water have been removed from the lower zone at RW-2 and transferred to the onsite wastewater treatment system for subsequent treatment and discharge to the sanitary sewer under a NPDES permit with the COP, as shown in Table 2-3. Additional information regarding the quarterly status of the groundwater interim action is provided in quarterly groundwater monitoring reports for the Terminal.

The horizontal well was installed in the upper zone during April 2000. During installation activities for HRW-1, a lateral from the main storm drain was penetrated. This launched an investigation into the impact of the east-west trending storm drain, located approximately 15 to 20 ft south (downgradient) of HRW-1, on the upper zone groundwater. Samples were collected from two manhole locations (SDM-1 and SDM-2) and from the stormwater drain outfall at the discharge point into the Willamette River and analyzed for PCP. Results indicated that groundwater from the upper zone was infiltrating into the concrete stormwater drain. Results of this sampling are presented in Table 2-4.

In conjunction with the storm drain outfall sampling, four piezometers (PZ-1 through PZ-4) were installed, and water level monitoring was performed in April and May 2000 in the area of the storm drain and HRW-1. The water level monitoring indicated that the water level in HRW-1 was lower than in the surrounding upper zone monitoring wells. From the water level data collected to date, information collected regarding the storm drain line, and the nature of the confining unit (described in Section 6.2.2), it is believed that there is a hydraulic interconnection between the upper and lower zones in the area of the horizontal well. Based on this information and observed conditions, pumping of HRW-1 is limited to the wetter months of the year (i.e., December through May). Table 2-3 summarizes pumping for the upper zone interim action through November 2004. Approximately 271,600 gallons of groundwater have been removed from HRW-1 since startup and transferred to the onsite wastewater treatment system for subsequent treatment and discharge to the sanitary sewer under a NPDES permit with the COP. Additional information regarding the status of HRW-1 is also provided in the quarterly groundwater monitoring reports for the Terminal.

Due to the inability to operate HRW-1 during the drier months from June through November and the potential for upper zone groundwater to infiltrate into the storm drain line, a groundwater intercept system was installed in the storm drain line on October 8, 2002, at the manhole (SDM-1) located closest to the point of discharge to the Willamette River (Figure 2-2). The system consists of an 8-inch diameter polyethylene pipe routed through the 15-inch storm drain line from manhole SDM-1A through manhole SDM-1. Stormwater from the East Property and Terminal office area is routed through the 8-inch liner pipe and discharged to the Willamette River. Potentially impacted groundwater entering the storm drain pipe between manholes SDM-1A and SDM-1 is routed through the annulus between the pipes and is collected in manhole SDM-1. The intercepted water is pumped from the manhole to Tank 16804 for processing by the onsite wastewater treatment plant. The installation information for the groundwater intercept system was provided in the fourth quarter 2002 groundwater monitoring report (Landau Associates 2003b). Status of the groundwater intercept system is provided in the quarterly groundwater reports for the Terminal.

## 2.2.2.7 In Situ Chemical Oxidation Interim Action

To further facilitate the remediation of PCP contamination in the groundwater and soil at the Terminal within the upper zone, the *in situ* chemical oxidation (ISCO) technique has been implemented. The primary objectives of the ISCO interim remedial action were to reduce the concentration of PCP present in upper zone groundwater within the PCP source area, to reduce the extent of the PCP plume in the upper zone groundwater, and to reduce the concentration of PCP in the soil located within the zone of groundwater fluctuation (i.e., smear zone). The specific type of chemical oxidation that was implemented for the interim action is based on Fenton's Reagent oxidation technology as applied by In-Situ Oxidation Technologies, Inc. (ISOTEC) of Englewood, Colorado. The Fenton's Reagent chemical oxidation reaction is created by the combination of soluble iron with low concentrations of hydrogen peroxide to produce hydroxyl radicals (•OH). The hydroxyl radical is a short-lived oxidizer that is very powerful, second only to fluorine in oxidative power. The hydroxyl free radicals attack the carbon double bonds of chlorinated hydrocarbons (e.g., PCP). Iron is used to catalyze the reaction.

#### Bench Scale and Pilot Studies

Use of the ISCO technique was originally assessed during a bench scale laboratory study and a pilot study conducted within and downgradient of the former PCP mixing area in September 2002. The results of the bench scale study and pilot test are provided in 2002 and 2003 ISOTEC reports, respectively (ISOTEC 2002, 2003).

For the pilot test, ISOTEC injected reagents into 10 locations within and downgradient of the former PCP mixing area. The material injected included 17 percent hydrogen peroxide, complexed iron solution, and tap water. The injection points were driven to a depth of 19 to 19.5 ft BGS and spaced 25 ft apart based on a 12.5 ft estimated radius of influence (ROI). The ROI was estimated based on site lithology, contaminant concentrations, and ISOTEC's previous experience. The depths were chosen so that the reagent could be delivered to the saturated zone between the water table at approximately 16 ft BGS and a silt layer at approximately 19 ft BGS.

Following the injection of the hydrogen peroxide solution, groundwater and soil samples were collected to evaluate the effectiveness of the pilot test. Results from the testing indicated that the pilot study was successful in reducing the concentration of PCP in soil and groundwater (ISOTEC 2003).

## Full Scale Implementation

Following the documentation of a successful pilot study using ISCO techniques (ISOTEC 2003), Landau Associates prepared a work plan for implementation of a full-scale ISCO interim remedial action

approach at the site (Landau Associates 2002a). The work plan was approved by DEQ on July 6, 2004 (DEQ 2004a).

In July 2004, a full-scale ISCO injection was implemented to treat PCP-impacted soil and groundwater in the upper zone within the boundaries of the PCP plume. The details of the first full scale injection are included in the third quarter 2004 groundwater monitoring and groundwater interim action status report (Landau Associates 2005a), and are summarized below.

From July 12 through 16, 2004, Time Oil's contractor (ISOTEC) injected ISCO reagents (17 percent hydrogen peroxide, complexed iron catalyst, and tap water) at 40 (IP-1-A through IP-21-A, and IP-23-A through IP-41-A) direct-push injection points located in the former source area of PCP impacts and downgradient of the source area. In addition, ISCO reagents were pumped into six lateral injection wells (MPLINE-01, -02E, -02W, -03E, -03W, and -04) located in the former PCP source area. The approximate locations of the direct-push ISCO injection points and lateral injection wells are shown on Figure 2-8).

The injection points were direct-push probes installed by the drilling contractor (Cascade Drilling, Inc.) and consisted of 1.5-inch diameter, 3-ft long injection screens attached to the bottom of the direct-push rods. The injection points were driven to a depth of approximately 19 ft BGS and spaced approximately 40-ft apart. The ISCO reagents were delivered at a depth of approximately 16 to 19 ft BGS (1 to 4 ft below the groundwater table). The ISCO injection typically consisted of approximately 200 gallons of hydrogen peroxide, 200 gallons of iron catalyst, and 60 gallons of water at each direct-push point. A total of approximately 7,650 gallons of 17 percent hydrogen peroxide, 7,650 gallons of iron catalyst, and 2,330 gallons of tap water were injected into the subsurface using the direct-push points. Based on the apparent effectiveness of the July 2004 ISCO event in reducing PCP concentrations in the upper zone groundwater, the radius of influence assumed for the injection points of approximately 25 ft appears to be accurate.

The six lateral injection wells are constructed of 4-inch diameter, schedule 40 PVC pipe with solid wall risers and horizontal sections comprised of alternating sections of solid wall pipe and well screen pipe. ISCO reagents were pumped into the lateral injection wells through the solid wall risers to diffuse into the groundwater formation through the well screen pipe. The horizontal portion of each of these lateral injection wells is located at approximately 12.5 ft BGS. Approximately 100 gallons of hydrogen peroxide, 100 gallons of iron catalyst, and 60 gallons of tap water were pumped into each of the two vertical risers at each lateral injection well. A total of approximately 1,200 gallons of 17 percent hydrogen peroxide, 1,200 gallons of iron catalyst, and 720 gallons of water were pumped into the subsurface using the lateral injection wells.

Based on comparison of groundwater analytical data collected in February and July 2004 prior to the injection (baseline) with post-injection groundwater data, the PCP concentration in the upper zone groundwater monitoring wells (RW-1, LW-11S, LW-13S and OX-1S through OX-4S, OX-6S, OX-7S, and OX-8S) was reduced by 63 percent (OX-8S) to 92 percent (OX-3S). The PCP concentration in the deep groundwater monitoring well (LW-11D) was reduced from 1.5 μg/L to less than 0.5 μg/L. The PCP concentration in the water collected from SDM-1 was reduced from 1,000 μg/L to 158 μg/L.

Comparison of the PCP plume concentrations in the upper zone using the June 2004 (Figure 2-9) and August 2004 (Figure 2-10) data, shows an apparent reduction in the estimated lateral extent of the plume in the east-west direction. However, the north-south extent of the plume remains relatively unchanged, although PCP concentrations were significantly reduced. The extent of the PCP plume in the lower zone groundwater before and after the injection was negligible.

The mass of PCP in the upper zone groundwater prior to the ISCO injection in July 2004 was estimated to be approximately 1.01 pounds, based on the groundwater samples collected in June 2004. The mass of PCP in the upper zone groundwater following the ISCO injection in July 2004 was estimated to be approximately 0.32 pounds, based on the groundwater samples collected in August 2004. The PCP mass calculations are provided in Appendix G of the third quarter groundwater monitoring and groundwater interim action status report (Landau Associates 2005a). Based on the mass calculations, it appears that the ISCO injection in July 2004 may have caused a mass reduction of PCP of approximately 0.69 pounds, or 68 percent.

Baseline and post-injection concentrations of dioxin/furan compounds were also monitored at three wells to determine whether there was any change due to implementation of the ISCO technique. The results indicated the following:

- The Total Equivalency Quotient (TEQ) in RW-1 increased from 0.00016272 ng/L to 0.001402 ng/L.
- The TEQ in OX-2S decreased from 0.11 ng/L to 0.02922 ng/L.
- The TEQ in OX-6S increased from 0.003588 ng/L to 0.300869 ng/L.

At this time, it cannot be definitively determined if the change in dioxin/furan compound concentrations can be attributed to the ISCO injection; however, the concentration of dioxin/furan compounds will be monitored in these three wells in the future to determine if there are changes in concentration trends that can be attributed to future ISCO injection events.

A second full scale ISCO injection event was conducted in January 2005. The results of this event are pending and will be provided to DEQ with the first quarter 2005 groundwater monitoring and groundwater interim action status report (Landau Associates in preparation),

### 2.2.3 Phase III Remedial Investigations

As described in Section 1.1, the Phase III RI was focused on areas of the Terminal where no extensive soil or groundwater investigations had been previously performed as part of the Phase I, Phase II, or East Property investigations. These areas are referred to as the Phase III study area (shown on Figure 1-2). For purposes of identifying and addressing data gaps, the Phase III investigative work was performed in three stages: a preliminary evaluation, an interim subsurface investigation, and the Phase III RI. Activities associated with the preliminary evaluation and interim subsurface investigation, and the results of these investigations, were previously documented in technical memoranda titled *Phase III Preliminary Evaluation* (Landau Associates 2002e) and *Phase III RI – Interim Subsurface Investigations* (Landau Associates 2003d).

The following sections summarize the preliminary evaluation and interim subsurface investigations conducted as part of the Phase III RI.

## 2.2.3.1 Preliminary Evaluation

The preliminary evaluation, conducted during the fall of 2001, was performed to identify whether hazardous substances had been released to the environment within the Phase III study area; to evaluate the general distribution of the hazardous substances, if found, in groundwater and soil; and to collect geological, hydrogeologic, and chemical data in advance of a full-scale Phase III RI. The preliminary evaluation included identification of 17 potentially impacted areas based on a review of historical aerial photographs and a review of historical operations at the terminal. These areas are described in Table 2-5 and shown on Figure 2-7. During the preliminary evaluation, 35 biased soil samples were collected from these potentially impacted areas and submitted for laboratory analysis. However, because the Phase III study area also includes several acres outside of these potentially impacted areas, an area-wide soil sampling approach (in conjunction with a biased sampling approach) was used to characterize soil during the preliminary evaluation. The area-wide approach included dividing the Phase III area into 27 200-ft by 200-ft grids, randomly selecting two to three soil sample locations within each grid, and compositing samples within a grid. This approach distributed soil sample locations throughout the 24-acre wide Phase III study area. Seventy-eight area-wide soil samples were collected from the 27 random grid-based sampling locations and submitted for laboratory analysis. The biased sampling locations within the 17 potentially impacted areas, the grid layout, and the random-based grid sampling locations are shown on Figure 2-7. In addition to soil sample collection, discrete groundwater samples were collected from 23 temporary well points located within the Phase III study area. The groundwater sampling locations were

selected to evaluate groundwater conditions where monitoring wells did not exist at the time of the preliminary evaluation. Discrete groundwater sampling locations (GW-#) are shown on Figure 2-11.

Also, during implementation of the preliminary investigation, Schnitzer Investment Corporation (Schnitzer) collected soil and groundwater samples at nine direct-push borings located on the Time Oil property just west of the Bell Terminal Tank Farm area. These samples were collected as part of an investigation being performed at the former PEO property located directly south and west of the Terminal. During the sampling, Landau Associates collected split soil and groundwater samples at the nine borings for Time Oil. The soil boring locations (SCH-#) are shown on Figure 2-7.

Results from the preliminary evaluation and the Schnitzer split sampling are provided in the Phase III preliminary evaluation technical memorandum (Landau Associates 2002e). Further discussion regarding sampling locations and analysis is provided in Section 5.1 of this report. A discussion of the preliminary evaluation results with the other Phase III RI results is provided in Section 7.0.

## 2.2.3.2 Interim Subsurface Investigation

Three subsurface investigations were conducted at the Terminal in July 2002 as part of the Phase III RI for the site. The investigations included: 1) a subsurface geology investigation within the Phase III study area using the cone penetrometer technique (CPT), 2) an investigation to better characterize soil and groundwater concentrations in the Bell Terminal Tank Farm area that were identified during the preliminary evaluation, and 3) a focused investigation to better define the extent of soil contamination identified in selected areas of the Phase III study area during the preliminary evaluation. Results from these investigations are presented in the Phase III interim subsurface investigation technical memorandum (Landau Associates 2003d) and are summarized below.

The CPT investigation was conducted to further evaluate the subsurface geology and hydrogeology of the Phase III study area, specifically regarding the extent of the confining unit and the interconnection between the upper and lower groundwater zones. Twenty-seven CPT explorations were completed at locations throughout the Phase III study area (Figure 2-11). Information regarding soil behavior type and static water level at various depths was used to refine the geological and hydrogeologic conceptual site model. The geologic and hydrogeologic information from the CPT borings are discussed in Section 6.0 of this report.

Along with the CPT investigation, soil and groundwater samples were collected within the Bell Terminal Tank Farm area following the detection of gasoline-range and diesel-range petroleum hydrocarbons in soil and groundwater during the Schnitzer investigation. To evaluate the source of the contamination, soil samples were collected at several depth intervals from ten locations (shown on Figure 2-7) within the Bell Terminal Tank Farm area. Shallow groundwater samples were also collected

from each of the ten locations. Sampling locations and methods along with the analytical results are discussed in Sections 5.1 and 7.0 of this report.

In conjunction with the CPT investigation, five discrete soil samples were collected to better define the extent of contamination detected in the capillary fringe soil where only composited samples were previously collected. The discrete soil samples were collected within the Phase III preliminary evaluation sampling grids 2, 12, 13, and 21 for chemical analyses (Figure 1-2). Results from the additional discrete soil sampling are discussed in Section 7.0 of this report.

# 2.3 REGULATORY SETTING

In July 1991, Time Oil entered into a VCP agreement with DEQ for DEQ review and oversight of cleanup of hazardous substances at the Terminal (DEQ 1991). Time Oil was notified in May 1992 (DEQ 1992) that the project was being referred to the Resource Conservation Recovery Act (RCRA) program in lieu of continued work with the VCP. Subsequently, at DEQ's request, Time Oil submitted a site characterization report to DEQ in August 1993 (Landau Associates 1993a) and submitted a draft RCRA facility investigation (RFI) work plan for the former PCP mixing area to DEQ in December 1993 (Landau Associates 1993b). In the spring of 1994, DEQ verbally advised Time Oil that the project would be transferred back to the VCP and, in October 1995, Time Oil received correspondence from DEQ formally reinstating the project to DEQ's VCP (DEQ 1995). A VCP agreement between Time Oil and DEQ was finalized on September 5, 1996. Since that time, investigations at the Terminal have been conducted in accordance with the state of Oregon's Hazardous Substance Remedial Action Rules (OAR 340-122), and associated guidance documents. The guidance documents are listed in the corresponding sections of this report, as applicable.

## 2.4 FACILITY PERMITS AND REGULATORY COMPLIANCE

Currently and historically, stormwater and wastewater from the Terminal has been managed in compliance with stormwater permits and a wastewater permit under NPDES requirements. A list of current and past permits at the terminal and the sampling requirements are provided in the following sections.

### 2.4.1 STORMWATER

Stormwater primarily infiltrates at the Terminal. In areas where stormwater runoff occurs, the stormwater is routed to the onsite wastewater treatment system (WWTS) or collected into the storm drain lines for discharge to the Willamette River. Stormwater from the former industrial areas of the terminal,

including the loading rack along the rail spur, the truck loading rack, the valve pit on the vessel dock, and the other areas where valves exist is routed to the WWTS. As described in the following section, the WWTS is under a permit from the COP (Metro) for discharge to the sanitary sewer along Time Oil road. Stormwater from the terminal entrance area and the low topographic area east of the rail spur and from the other areas of the Terminal during storm events is collected into the storm drain line for discharge into the Willamette River. The river outfall is under a NPDES permit as listed below.

The storm drain line runs east-west along the length of the Terminal about 160 ft north of the southern property boundary (Figures 2-1 and 2-2) to the river outfall. The storm drain was constructed before construction of the Terminal in 1943 and, therefore, backfill/construction details are not available. Internal inspection of a 600-ft section of the storm drain by remote video camera in April 2000 revealed that the line is a 15-inch diameter concrete pipe. The pipeline appears to be in good condition with few internal leaks. Several lateral lines to the main line were also observed in the Main Terminal Tank Farm area. One of the lateral lines was damaged during drilling of the horizontal well installed as part of the groundwater interim action (see Section 2.2.2.6). The lateral lines were subsequently isolated from the main line using internal patches.

Stormwater data collected between September 2001 and August 2002 at the catch basin closest to the river contained PCP concentrations ranging from 0.7 to 190  $\mu$ g/L. Except for diesel-range petroleum hydrocarbons, petroleum compounds (gasoline, mineral spirits, kerosene, and lube oil) were not detected. Diesel-range petroleum hydrocarbons were detected twice at concentrations of 0.261 mg/L and 0.3 mg/L. These data and the groundwater flow pattern in the upper zone indicated that upper zone groundwater was likely infiltrating into the storm drain line. In October 2002, a groundwater intercept system was installed within the storm drain to capture groundwater between the two stormwater manholes closest to the river. Stormwater samples collected from the groundwater intercept system located in the catch basin closest to the river (SDM-1) continue to be analyzed as influent into the onsite WWTS on a quarterly basis; however, these concentrations represent groundwater captured by the intercept system that do not reach the river outfall. Samples are also collected from the river outfall, when exposed.

The current and historical stormwater permits are listed below.

Permit Type	File No.	Start Date	Outfalls	Parameters/Frequency	
1200-T	109186	8/13/96	River	Oil & Grease; pH; total Phosphorus; COD; TOC; metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn); TSS	
1200-Z	109186	11/6/97	River	Oil & Grease; total copper, lead, zinc; pH; TSS	
1200-C (East Property only)	109737	11/16/01		Turbidity	

## 2.4.2 WASTEWATER

Wastewater effluent samples are collected from the onsite WWTS in accordance with the permit requirements. Wastewater effluent concentrations typically meet the maximum allowable limit for PCP at  $40~\mu g/L$ . Wastewater effluent is discharged to the COP sanitary sewer along Time Oil Rd, under the permit described below.

Permit Type	Permit Number	Start Date	Outfalls	Volumes	Parameters/ Frequency
POTW	400-121	2/15/96	Sanitary sewer	None specified	PCP, BETX, pH

Since groundwater recovery began as part of a groundwater interim action in fall 2000, wastewater effluent concentrations from the onsite WWTS have met the maximum allowable limit except for a single occurrence in July 2003, and sporadically throughout January though April 2004. Following notification to the COP and shutdown of the system following each upset, the rate of hydrogen peroxide solution introduced to the water was increased and the sampling frequency was increased to weekly until compliance within the allowable limit was consistently achieved. In March 2004, permission was obtained from the COP to modify the WWTS to improve the efficiency of the treatment system. The modifications included the use of a higher dose of hydrogen peroxide, implementation of a batch/mix tank prior to discharge, and aeration of the batch-mix tank to improve contact between the hydrogen peroxide and groundwater being treated. In response to the upset condition in April 2004, minor changes were made to the WWTS to improve the aeration of the water prior to discharge. Since April 2004, effluent concentrations indicate that the WWTS has been operating within the established permit limits. Documentation of the upset conditions was provided to the COP. Effluent concentrations for each sampling event are provided in the respective quarterly groundwater monitoring and interim action status reports.

## 3.0 PHYSICAL SETTING

This section provides a description of the physical setting of the Terminal, including topography, regional geology and hydrogeology, surface water features, climate, and meteorology.

## 3.1 TOPOGRAPHY

The Terminal covers approximately 52 acres within the floodplain of the Willamette River. The ground surface at the Terminal is relatively flat, with ground surface elevations in the Main Terminal Tank Farm area and the Bell Terminal Tank Farm area ranging from about 28 to 30 ft MSL. Along the western boundary of the Main Terminal Tank Farm area, the ground surface slopes abruptly downward to the Willamette River with topographic elevations ranging from 30 to 8 ft MSL. The East Property, which covers approximately 27 acres, is generally flat with a topographic elevation ranging from 24 to 27 ft MSL. The only significant variation from the generally flat topography is a large linear topographic mound in the northern portion of the East Property. The east-west trending mound is approximately 450 ft x 50 to 80 ft (L x W) with a topographic range from 24 to 38 ft MSL (Figure 2-1).

Historical aerial photographs indicate that prior to site development for the Terminal, similar to current conditions, the area was located in the river floodplain adjacent to the main channel with no apparent historical river channels or other river geomorphic features or surface water bodies that would impact current stormwater or groundwater flow. Historical aerial photographs showing the area in the late 1930s are shown on Figures 2-12 and 2-13. Historical aerial photographs for site conditions after Terminal development beginning in 1944 are provided in the Phase III RI work plan (Landau Associates 2001a).

Historically, ground surface topography at the Terminal has likely been affected by periodic dredging of the Willamette River. Dredge material from the river was likely used throughout the site as fill for land development. A review of historical aerial photographs indicates that the topographic mound on the East Property existed as early as 1940, but was likely created when the East Property was leveled. Based on a review of historical aerial photographs (Landau Associates 1997b), some changes to the west side of the mound have occurred through time due to scraping from excavation for borrow or regrading, but the majority of the mound has remained unchanged since the 1940s.

Except for the East Property, the main entrance road, and the areas around the office and loading racks, most of the site lacks vegetation and is unpaved. Vegetation on the East Property mainly consists of small scrub brush, blackberry bushes, and grasses. A small topographic depression (approximately 0.9 acre) was observed on the far northeastern corner of the property as part of a site survey conducted for the ecological risk assessment screening process (Landau Associates 1999a). Based on discussions with

Time Oil personnel, the depression formed in recent years (since 1995) when drainage from this area was blocked by construction and mounding of soil on the adjacent property to the east. In December 2000, the Oregon Department of State Lands (DSL) determined that the area was not a jurisdictional wetland on the basis that it appeared to be artificially created on fill material (Oregon DSL 2000).

The Terminal is located approximately at river mile 4 on the Willamette River. Along this reach, the river flows to the northwest and is about 1,500 ft wide.

### 3.2 REGIONAL GEOLOGY

This section provides a description of the regional geology in the area, as summarized from several published reports (Swanson et. al. 1993; McFarland and Morgan 1996; and Beeson et. al. 1991). Regional surficial geology and a regional geologic cross section based on these references are provided on Figures 3-1 and 3-2, respectively. The cross section includes a section through the Willamette River at a location that approximately bisects the Terminal. Local geology for the Terminal is described later in Section 6.1.

The Terminal is located within a structural basin referred to as the Portland Basin. The Portland Basin is defined as the area bounded by the Tualatin Mountains to the west, the Lewis River to the north, the foothills of the Cascade Range to the east, and the Clackamas River to the south. The Portland Basin is described as a northwest trending, pull-apart basin with northwest and northeast trending topographic lineations, faults, and folds. The Tualatin Mountains form a northwest-trending anticlinal ridge that is bounded along its eastern flank by the Portland Hills Fault (Figure 3-1). The Willamette River flows along the base of the eastern side of the Tualatin Mountains and the Terminal is located along the northeastern bank of the river. The Portland Basin is comprised of two distinct geologic associations: the basin-fill sediments of late-Miocene to Holocene age that are present throughout much of the basin, and sedimentary and volcanic bedrock units of Miocene to Pliocene age that underlie the basin-fill sediments and outcrop around the edge of the basin on the west, north, and east. These geologic formations are discussed in the following paragraphs, from oldest to youngest:

- Columbia River Basalt Group (Tcr). The bedrock units of the Portland Basin are comprised of the Miocene flood basalts identified as the Columbia River Basalt Group (CRBG) and the Skamania volcanics. The CRBG is the most extensive rock unit in the Portland Basin. This unit has been folded and faulted and forms the Tualatin Mountain uplands southwest of the site. The unit is assumed to underlie the approximate 1,800 ft thickness of the younger basin-fill sedimentary and volcanic rocks in the center of the basin and reaches a maximum thickness of more than 700 ft.
- Sandy River Mudstone (Tsr) and Troutdale Formation (Tt). Immediately overlying the bedrock units throughout much of the basin are the fine-grained sediments of the Sandy River Mudstone and the conglomerate and finer-grained deposits of the Troutdale Formation of

Miocene to Pliocene age. The Troutdale Formation overlays and interlays with the Sandy River Mudstone. These geologic formations were derived from sediment deposited by an ancestral Columbia River and local streams draining the Cascade Range as well as sediment derived from episodes of Pliocene high Cascade volcanism. The Troutdale Formation is the most extensive sedimentary unit in the Portland Basin.

- Catastrophic Flood Deposits (Qff). During the late Pleistocene, sediments were deposited by alluvial and catastrophic flood events in the Portland Basin as a result of repeated failures of glacial ice dams that impounded glacial Lake Missoula (Waitt 1985). These sediments fill the center of the basin and are thickest adjacent to the current locations of the Columbia and Willamette Rivers. Catastrophic flood deposits consist of a basaltic sand and gravel unit with varied amounts of cobbles and boulders and a finer stratified, sand, silt, and clay unit. The coarse unit is found near the present channel of the Columbia River and beneath Sauvie Island.
- Alluvium (Qal). Recent alluvial deposits exist along all major streams in the Portland Basin with the most extensive deposits along the Columbia and Willamette Rivers. The Columbia and Willamette River alluvium is primarily sand and silt, whereas the alluvium of the major tributaries is mostly cobble and gravel. Based on geologic logs for wells located near the Terminal, these deposits reach a maximum thickness of about 180 ft.

### 3.3 REGIONAL HYDROGEOLOGY

This section provides a description of the regional hydrogeology for the Terminal area, as summarized from published reports (McFarland and Morgan 1996 and Swanson et. al. 1993). Local hydrogeology at the Terminal is discussed in Section 6.2.

Eight major hydrogeologic units form the Portland Basin aquifer system (for a description of the Portland Basin, see Section 3.2). From oldest to youngest, they include: older rocks, sand and gravel aquifer, confining unit 2, the Troutdale Sandstone Aquifer, confining unit 1, the consolidated gravel aquifer, and the unconsolidated sedimentary aquifer. The eighth unit is the undifferentiated fine-grained sedimentary aquifer that exists in areas of the basin where the Troutdale Sandstone Aquifer and the Sand and Gravel Aquifer pinch out. These units can be grouped into three major subsystems, from oldest to youngest: older rocks, lower sedimentary, and upper sedimentary.

The older rock subsystem consists of Miocene and older volcanic and marine sedimentary rocks, generally of low permeability, that underlie and bound the basin-fill sediments in the Portland Basin. With the exception of the CRBG, these older rocks are poor aquifers and, in most areas, supply water in quantities adequate only for domestic use. These rocks are not a primary source of water in many parts of the basin. Where the older rocks are covered by basin-fill sediments, the older rocks are generally too deep to be used as a water supply under the current demand for water.

In most areas of the basin, the lower sedimentary subsystem is composed of interbedded consolidated silt, sand, and clay referred to as confining unit 1 and confining unit 2, and interlayered vitric

sandstone and quartzite-pebble-bearing basaltic conglomerate referred to as the Troutdale Sandstone Aquifer and the Sand and Gravel Aquifer. Toward the western edge of the basin (i.e., along the Willamette River), the Troutdale Sandstone Aquifer and Sand and Gravel Aquifer become finer grained and apparently pinch out. In these areas, confining unit 2 and confining unit 1 are not distinguishable from each other, and the lower sedimentary subsystem is mapped as undifferentiated fine-grained sediments. This undifferentiated fine-grained sediment unit is generally a poor water-bearing formation.

The upper sedimentary subsystem is composed of an unconsolidated sedimentary aquifer overlying the consolidated gravel and volcanic aquifer known as the Troutdale Gravel Aquifer. The unconsolidated sedimentary aquifer consists mainly of late Pleistocene catastrophic flood deposits (Qff) and recent Columbia River alluvium (Qal). The aquifer also includes water-bearing alluvial deposits that occur along smaller streams in the basin as well as floodplain deposits, and terrace deposits along major tributaries. Both the unconsolidated sedimentary aquifer and the Troutdale Gravel Aquifer are important and productive aquifers in the Portland Basin. In some parts of the basin, the unconsolidated sedimentary deposits are unsaturated; however, in other areas where the unconsolidated sedimentary aquifer consists of saturated alluvium or coarse-grained catastrophic flood deposits, the aquifer is considered the most productive aquifer in the Portland Basin, yielding up to 6,000 gallons per minute (gpm). Alluvium underlying the Columbia River and Willamette River floodplains consists primarily of clayey silt and sand that yields only 5 to 40 gpm. Coarser-grain catastrophic flood deposits can yield 100 to 200 gpm. The Troutdale Gravel Aquifer can yield from 50 to 2,000 gpm and many public supply, industrial, and domestic supply wells are completed in this aquifer.

Upland areas (i.e., Tualatin Mountains, Boring Hills, and western Cascade Range) have strong downward components of groundwater flow and are classified as recharge areas. Recharge to the aquifer system in the Portland Basin is primarily by infiltration of precipitation. However, within the urbanized parts of the basin, other sources contribute significant amounts of water locally to the aquifer. The two most significant urban sources of recharge are runoff from impervious surfaces to storm drains or dry wells, and effluent from onsite wastewater treatment or disposal systems (McFarland and Morgan 1996).

Lowland areas (narrow zones along the major streams of the Portland Basin) generally have strong upward components of groundwater flow and are classified as discharge areas. Groundwater discharge in the Portland Basin is primarily to springs, streams, and by pumping from wells. The largest component of groundwater discharge in the Portland Basin is to streams and rivers. Most streams and rivers in the basin are gaining (i.e., receiving groundwater), including the Columbia and Willamette Rivers.

### 3.4 SURFACE WATER FEATURES

The Willamette River bounds the Terminal to the west, but there are no surface water features (streams, lakes, etc.) on the Terminal property. Because of the relatively flat topographic ground surface, most surface water runoff likely infiltrates directly into the ground. Any runoff along the roads or old railroad beds likely flows toward the eastern side of the property.

### 3.5 CLIMATE AND METEOROLOGY

Climate and meteorology data discussed in this section were collected at the Portland International Airport (PDX) by the National Oceanic and Atmospheric Administration (NOAA; http://www.ocs.orst.edu). PDX is located approximately 9 miles east of the Terminal.

The Terminal is located approximately 50 miles from the Pacific Coast and midway between the low coastal range to the west and the higher Cascade range to the east. The climate in the project area is west coast marine, characterized by moderate rainfall. The Cascade mountain range forms a rain shadow from the coastal moisture to the arid and semiarid regions of eastern Oregon and Washington.

The average annual rainfall in Portland (November 1941 through September 2003) was about 36 inches. The average annual rainfall recorded during performance of the Phase III RI activities (2001 to 2003) was approximately 31 inches, and the average monthly rainfall during that time was 2.6 inches. Approximately 60 percent of the annual rainfall occurs during the winter months in the Portland area. Monthly average temperatures at PDX varied between about 35°F during the winter months to about 77°F during the summer months between 1941 and 2003.

Airflow is usually from the northwest in spring and summer and from the east-southeast in fall and winter. Average wind speed at PDX ranges from approximately 7 miles per hour (mph) in September and October through 10 mph in January. The annual mean windspeed is 8 mph.

## 4.0 LAND AND BENEFICIAL WATER USE EVALUATIONS

In accordance with OAR 340-122-080 (e) and (f), evaluations were conducted regarding current and reasonably anticipated future land use and regarding current and reasonably likely future beneficial water use at the Terminal and surrounding areas as part of the Phase II RI. The information collected during these evaluations is reported in the Phase II RI report (Landau Associates 2001b). Updated information obtained during the Phase III RI investigation has been incorporated into these evaluations. These evaluations will be used during subsequent studies to evaluate potential human and ecological exposures during the risk assessment and for selecting protective remedial options. The land and beneficial water use evaluations are summarized below.

## 4.1 LOCALITY OF THE FACILITY

The locality of the facility is defined by DEQ rule as "any point where a human or an ecological receptor contacts, or is reasonably likely to come into contact with, facility-related hazardous substances." [OAR 340-122-115(34)]. Based on the soil and groundwater data collected for all phases of the remedial investigation (see Section 7.0 for nature and extent of contamination at the Terminal), the locality of the facility for the Terminal has been defined to include all of the Phase II and Phase III study areas, and the shoreline west of the Main Terminal Tank Farm area extending to the locations of the shoreline wells, as shown on Figure 4-1. Based on the shoreline groundwater data collected in November 2004, February 2005, and June 2005, the river has not been included in the locality of facility because, as discussed in Section 7.2.2.2, except for chromium and copper at a few shoreline wells during the November 2004 event sampling, facility-related groundwater contaminants are currently not reaching the Willamette River at concentrations above applicable screening level values. These data indicate that, even though there is a physical groundwater transport pathway from the upland areas of the terminal to the river, there is not a complete exposure pathway via groundwater at the Time Oil facility to the Willamette River. Therefore, groundwater discharge to the Willamette River is not a current or future beneficial use of the groundwater and the Willamette River is not within the locality of the Time Oil facility. Groundwater concentrations at the shoreline wells will be confirmed through a full year of groundwater monitoring. Also, Time Oil is planning to conduct a source control evaluation to determine whether there is a potential for constituents currently observed in wells within the Main Tank Farm Area to migrate to the river. Historical discharges to the river, including discharges via the storm drain will be addressed during the RI/FS for the Portland Harbor Superfund Project. Low level detections of PCP have been observed within the lower zone during the past year at the southern property boundary of the Terminal. The current groundwater interim action has effectively reversed downgradient groundwater flow near this area; however, because the

predominant groundwater flow direction from this area is to the west/southwest toward the river (Bridgewater Group 1998, 2001) and there is potential for migration of these concentrations to the river in the absence of the interim action, a small portion of the former PEO property south of the property boundary near the river is included in the locality of facility. Continued implementation of the groundwater interim action and implementation of the ISCO technique is expected to contain migration of and remediate groundwater impacted by, PCP originating from the former PCP formulation operations in the Phase II RI study area at the Terminal.

The Port of Portland T-5 property to the north of the Main Terminal Tank Farm area near the river is possibly down- or cross-gradient of the Terminal. Data collected from the new wells located at the north property boundary at the northern edge of the Main Terminal Tank Farm area during the fourth quarter 2004 event indicate that low levels of contaminants were detected in groundwater in this area. During June 2005, Time Oil attempted to sample two existing wells on the Port of Portland property located within 300 ft of the terminal's north property boundary. Both wells were dry. Sampling of these wells will be attempted again during the wet season, likely in late 2005 or early 2006. Until these sample results are collected and evaluated, the locality of facility boundary in this area is approximate, but assumed to extend to the north property boundary.

The property west of the Bell Terminal Tank Farm area has not been included in the locality of the facility because, although contaminants have been detected in soil and groundwater along the western property boundary, the data indicate that there appears to be a separate source for contamination in this area and also in the area on the former PEO property where product has been observed in well MW-4 on a consistent basis between 2001 and 2003 (the most recent data available) (Gradient 2003). Well MW-4 is located on the former PEO property more than 100 ft downgradient of the operating portion of the Bell Terminal Tank Farm area and about 50 ft from the western property boundary near the locations of the former diesel ASTs where significant petroleum releases are known to have occurred. No product has ever been observed within the Bell Terminal Tank Farm or within the Time Oil property boundary in this area. Even though it is likely that the plume originating from the central portion of the Bell Terminal commingles with the plume originating near the western property boundary, and that both of these plumes commingle with other contamination originating on the former PEO property where significant petroleum releases are known to have occurred, such as in the area where the former diesel ASTs were located near well MW-4, it is unlikely that the elevated concentrations observed near the western property boundary or on the former PEO property originate from the Bell Terminal. This conclusion is based on the significant increase in both soil and groundwater concentrations for petroleum constituents across the western property boundary and on the former PEO property. Therefore, the locality of facility boundary was extended to the western property boundary. Data from the adjacent property is not sufficient to identify

the point at which any plume moving from the Bell Terminal terminates within plumes originating at the PEO property in order to define the locality of the facility in this area with certainty.

## 4.2 LAND USE EVALUATION

As described in the Phase II RI report, a land use evaluation was conducted to identify the current and reasonably anticipated future land uses at the Terminal and surrounding properties immediately adjacent to Terminal. The land use evaluation was conducted in accordance with DEQ's guidance *Consideration of Land Use in Environmental Remedial Actions* (DEQ 1998b) and included a survey of adjacent properties, determination of current zoning and comprehensive plans, and identification of any regional trends relevant to land use and activities at the Terminal and the surrounding properties. The results of the land use evaluation identified the following historical and current land use information about the Terminal and at the adjacent properties:

- Current and historical land use for the Terminal and the adjacent properties is/was primarily
  industrial with some commercial use. Current adjacent property owners are shown on
  Figure 4-2.
- The East Property at the Terminal and the property owned by Jefferson Smurfit were also used by the military in the 1940s for military barracks and equipment storage.
- The current zoning of the Terminal property is heavy industrial (IH), which is also the comprehensive plan designation for the site property. This designation indicates that the likely reasonable future land use at the Terminal and surrounding properties is and will remain as heavy industrial.
- The Terminal area is within a River Industrial Greenway Zone overlay, within which "river-dependent and river-related industries which strengthen the economic vitality of Portland as a marine shipping and industrial harbor, while preserving and enhancing riparian habitat and providing public access where practical" are encouraged and promoted. Any changes to these designations would require rezoning and are unlikely based on the overall current and planned future use of land in the vicinity of the Terminal.

Zoning designations for the Terminal and the adjacent properties are presented on Figure 4-3.

## 4.3 BENEFICIAL WATER USE DETERMINATION

As described in the Phase II RI report, a beneficial water use determination was conducted by evaluating current, historical, and reasonably likely future water uses at the Terminal and adjacent properties. The evaluation was conducted in accordance with OAR 340-122-080 and DEQ's *Guidance for Conducting Beneficial Water Use Determinations at Environmental Cleanup Sites* (DEQ 1998c) and also considered the beneficial uses of the Willamette River, as designated by OAR 340-041, Table 340A.

The beneficial water use determination included: inventorying active and inactive private and public/municipal wells within a 1-mile radius of the Terminal, a survey of adjacent property owners and public water suppliers, a review of hydrogeologic documents, a survey of surface water bodies within the Terminal property boundaries or on adjacent properties, and a survey of water rights. Private and municipal wells and water rights identified within a one-mile radius of the Terminal are shown on Figures 4-4 and 4-5, respectively.

The results of the evaluation and the data collected during the Phase II and Phase III RI developed the following information about the current and likely future beneficial use of groundwater and surface water at the Terminal, at adjacent properties, and within a 1-mile radius of the Terminal:

- The current and likely future beneficial use of groundwater and surface water at the Terminal, at adjacent properties, and within a 1-mile radius of the Terminal is primarily industrial with limited use for irrigation of ornamental vegetation (i.e., not food crops) and does not include use as drinking water. Irrigation does not occur in direct proximity to the site and groundwater flow patterns are not impacted by pumping for irrigation; therefore, exposure to groundwater via irrigation is not a significant pathway. Groundwater at the Terminal is currently not used for any purposes; future groundwater use at the Terminal is expected to be limited to industrial use. However, there is insufficient yield of upper zone groundwater to facilitate its use for industrial purposes.
- A mitigation wetlands area, owned by the Port of Portland (Port), is located on the adjacent property to the north of the Terminal. Contaminants are present in soil and groundwater along the northern property boundary of the Main Terminal Tank Farm area. Time Oil attempted to sample two wells within 300 ft of the northern property boundary on the Port of Portland property in June, 2005, but the wells were dry. However, it is anticipated that these wetlands are upgradient of the Phase II and Phase III study areas and, therefore, do not provide an exposure pathway for contaminants in the soil and groundwater at the Terminal. Time Oil will attempt to sample these wells again during the wet season, likely in late 2005 or early 2006.
- The Willamette River borders the Terminal to the west. Contaminants are present in soil and groundwater along the western boundary of the Main Terminal Tank Farm area. Groundwater samples collected in Willamette River shoreline wells indicate that facility-related groundwater contaminants are not currently reaching the river at concentrations above applicable screening level values. Therefore, the river is not considered to be within the locality of the Time Oil facility, and groundwater discharge to the Willamette River is not a current or future beneficial use of groundwater within the defined locality of the facility (see Section 7.2.2.2). Historical impacts to in-water media in the Willamette River are being addressed by sampling and evaluations conducted for the Portland Harbor Superfund RI/FS.

Shallow groundwater at the Terminal is not considered suitable for beneficial use. For the upper zone, aquifer yield is low (less than 1 gpm) and the unit is discontinuous: therefore, the upper zone would not likely support long-term use for any purpose. For the lower zone, aquifer yield appears to be adequate for use (80 to 100 gpm based on aquifer test results); however, because of its interconnection with the upper zone and its heterogeneous nature, it is possible that this yield could not be sustained for long-term

use. For example, the lower zone groundwater recovery well, RW-2, has been pumping since fall 2000, with sustained yields of only about 8 gpm. Naturally occurring water quality appears to be suitable for both units. However, groundwater used for water supply throughout the Portland area has been typically derived from the Troutdale aquifers probably because of their significantly higher yield. Therefore, based on the significantly more favorable hydrogeologic characteristics of the Troutdale aquifers and historical groundwater use in this area, it is unlikely that the shallow water-bearing units defined at the Terminal would be used in the future for water supply. DEQ concurred with this determination in its NFA letter for the East Property (DEQ 2003a).

Continued implementation of the groundwater interim action and implementation of the ISCO technique is expected to contain migration of and remediate groundwater impacted by, PCP originating from the former PCP formulation operations in the Phase II RI study area at the Terminal.

## 5.0 PHASE III REMEDIAL INVESTIGATION SAMPLING

This section provides a description of the soil and groundwater investigations performed for the Phase III RI. As previously discussed in Section 2.0, the Phase III investigative work was conducted in three stages: a preliminary evaluation, an interim subsurface investigation, and the final stage of the Phase III RI. Activities associated with the preliminary evaluation and the interim subsurface investigation, and the results of these investigations, were previously documented in technical memoranda titled *Phase III Preliminary Evaluation* (Landau Associates 2002e), and *Phase III Interim Subsurface Investigation* (Landau Associates 2003d). These investigations are also described below to provide the sampling strategy and rationale used to identify sample locations for the final stage of the Phase III RI. The soil analytical data for the investigations performed during the final stage of the Phase III RI, the associated data validation report, and laboratory data packages are provided in Appendices E, F, and G of this report. Groundwater data collected for the fourth quarter 2003 groundwater monitoring event and for the first, second, third, and fourth quarter 2004 groundwater monitoring events are provided in quarterly reports (Landau Associates 2004a,b,c and 2005a,b). All analyses were performed by Specialty Analytical, Inc., a laboratory located in Tualatin, Oregon, except as noted in Section 5.2.5.1.

# 5.1 SOIL INVESTIGATION

This section describes the soil investigations conducted for the Phase III RI, including the preliminary evaluation, the interim subsurface investigation, and the final stage soil investigation.

## 5.1.1 Preliminary Evaluation

The Phase III RI soil investigation began in August 2001 with the preliminary evaluation (Landau Associates 2002e). As described in Section 2.2.3.1, the preliminary evaluation was performed to identify whether hazardous substances had been released to the environment within the Phase III study area; to evaluate the general distribution of the hazardous substances, if present, in soil; and to collect geologic, hydrogeologic, and chemical data in advance of a full-scale Phase III RI. During the preliminary evaluation, 17 potentially impacted areas were identified based on a review of historical aerial photographs and a review of historical operations at the Terminal. These areas are described in Table 2-5 and shown on Figure 2-6. During the preliminary evaluation, a biased (or focused) sampling approach was used to investigate the soil in these areas. In the smaller potentially impacted areas, the approach involved collecting three to four discrete soil samples, each representing a specific depth interval, from a central location within each area (referred to as biased sampling areas). For the larger potentially impacted areas (also referred to as biased sampling areas), the biased sampling approach involved

collecting three to four composite soil samples, each representing a specific depth interval from two subsample locations centrally located within the potentially impacted area. The depth intervals sampled within the potentially impacted areas included the upper 6 inches (0 to 0.5 ft BGS), 1 to 1.5 ft BGS, 5 to 5.5 ft BGS, and the capillary fringe. Samples from the upper 1.5 ft of soil were collected to determine whether contamination, if any, may be due to surface spills and, therefore, act as a potential source for groundwater contamination. A total of 9 surface soil samples (0 to 0.5 ft BGS) and 16 shallow soil samples (1 to 1.5 ft BGS) were collected and analyzed. Samples were collected from an intermediate depth interval (5 to 5.5 ft BGS) within the unsaturated zone at each location, but were archived at the laboratory. The samples were analyzed if contamination was detected in the surface soil sample and the results for the shallow soil sample (1 to 1.5 ft BGS) indicated an increasing concentration trend. Only one intermediate depth soil sample (5 to 5.5 ft BGS) was analyzed. This sample was collected from potentially impacted area B11. Soil samples were collected from the capillary fringe to determine the potential for groundwater contamination at each location. A total of 16 soil samples from the capillary fringe zone were collected from the potentially impacted areas, except area B13, and submitted for laboratory analysis. No soil samples were collected from area B13 during the preliminary evaluation because soil samples from this area were previously collected in conjunction with the removal of an underground storage tank (UST) formerly located within this area (GeoEngineers 2001).

Because the Phase III study area also includes several acres outside of these potentially impacted areas, an area-wide soil sampling approach (in conjunction with the biased sampling approach) was used to characterize soil during the preliminary evaluation. The area-wide approach divided the Phase III area into 27 200-ft by 200-ft grids, from which 2 to 3 soil sample locations were randomly selected and then composited within each grid. This approach resulted in the sampling of soil at locations throughout the entire 24-acre Phase III study area. A total of 78 area-wide soil samples were collected from the 27 random grid-based sampling locations and submitted for laboratory analysis. Of these 78 soil samples, 24 were collected from the surface (0 to 0.5 ft BGS), 27 were collected from the shallow subsurface (1 to 1.5 t BGS), 1 was collected from an intermediate depth (5 to 5.5 ft BGS), and 27 were collected from the capillary fringe zone. The same rationale used for selecting sample depth intervals for the biased sampling approach was used for selecting sample depth intervals for the area-wide sampling approach. The area-wide random-based grid sampling locations and layouts are also shown on Figure 2-7.

In addition to the soil samples collected for the preliminary evaluation, five soil samples were collected by Schnitzer (SCH-56, SCH-58, SCH-59, SCH-61, and SCH-63) at locations on Time Oil property along the western property boundary, just west of the Bell Terminal Tank Farm area (Figure 2-7). The samples were collected within the capillary fringe (approximately 15 ft BGS). Landau Associates collected split soil samples for Time Oil at each location. Landau Associates also collected a

soil sample at location SCH-60, shown on Figure 2-7. The soil samples collected by Schnitzer were analyzed for diesel-, and gasoline-range petroleum hydrocarbons; PAHs, and VOCs. The analytical results are presented in Table 5-1 (GP-#). All of the split soil samples collected by Landau Associates were analyzed for diesel- and gasoline-range petroleum hydrocarbons. Four of the split soil samples were also analyzed for PAHs and VOCs. Results for the split soil samples are also shown in Table 5-1 (SCH-#). A comparison of the split soil sample results with the Schnitzer soil sample results indicates relatively high variability between the results (i.e., the relative percent difference between the diesel-range petroleum hydrocarbon results ranged from about 7.5 to 116 percent and the relative percent difference between the gasoline-range petroleum hydrocarbon results ranged from about 76.5 to 184 percent). These concentration differences are likely related to heterogeneities in the soil sample. The split soil sample results for gasoline-range petroleum hydrocarbons were significantly higher for the samples collected by Landau Associates than the samples collected by Schnitzer. VOCs were also more frequently detected in the samples collected by Landau Associates because of significantly lower laboratory reporting limits.

Based on the results from the preliminary evaluation, the following soil data gaps were identified:

- The extent of the confining unit separating the upper water-bearing and lower water-bearing zones was not well defined throughout the Phase III study area
- The source(s) of contamination detected in the Schnitzer soil samples and the split soil samples located in the area just west of the Bell Terminal Tank Farm area, but within the Time Oil property boundary (Figure 2-7) was not determined
- The horizontal extent of soil contamination within the capillary fringe in several of the grids (2, 3, 8, 9, 12, 13, 14, 21, 22, and 23) could not be well defined based on the composite soil sample results for that specific grid
- Potential source(s) of contamination in the capillary fringe soil in the Main Terminal Tank Farm area were not clearly identified
- The horizontal extent of surface soil contamination within the eastern portion of the Phase III study area (specifically grids 7, 10, 11, 15, 17, and 19) could not be well defined based on the composite soil sample results for specific grids.

Therefore, additional investigation work was planned to address these data gaps, as described in the following sections.

Sample collection methods for the preliminary evaluation soil investigation and the Schnitzer split soil samples are described in detail in the Phase III preliminary evaluation technical memorandum (Landau Associates 2002e). Laboratory analyses performed for each soil sample are summarized in Table 5-2.

## 5.1.2 Interim Subsurface Investigation

To address the first three data gaps identified in Section 5.1.1 above, an interim subsurface investigation was performed [documented in the Phase III interim subsurface investigation technical memorandum (Landau Associates 2003d)]. The fourth and fifth data gaps were addressed by the final stage of the Phase III RI soil investigation, which followed the interim subsurface investigation. The primary goal of the interim subsurface investigation was to develop a better understanding of the subsurface geology to guide design and installation of additional monitoring wells and to complete the conceptual site model for the Terminal. To accomplish this goal, 27 subsurface explorations were performed throughout the Phase III study area using CPT. This technique provided a continuous stratigraphic description of the subsurface to about 60 ft BGS at 23 locations and to about 100 ft BGS at four locations. The CPT explorations were located in areas where subsurface information had not already been obtained (primarily the Main Terminal Tank Farm area and the Bell Terminal Tank Farm area). The CPT exploration locations are shown on Figure 2-11.

The other goals of the interim subsurface investigation included identification of the source of the soil and groundwater contamination in the area just west of the Bell Terminal Tank Farm area and further definition of the area of contaminated capillary fringe soil within the preliminary evaluation sampling grids selected for investigation at this time. Grids that were not further investigated during the interim subsurface investigation would be investigated during the final stage of Phase III soil investigation. To accomplish these goals, 49 soil samples were collected at depth intervals of 0 to 0.5 ft BGS, 1 to 1.5 ft BGS, 5 to 5.5 ft BGS, and within the capillary fringe zone from 10 direct-push borings in the Bell Terminal Tank Farm area, and 5 soil samples were collected from the capillary fringe zone at five preliminary evaluation random subsample locations (G2-1, G2-2, G12-2, G13-1, and G21-2). The depth intervals sampled during the direct-push explorations in the Bell Terminal Tank Farm area were the same as those collected during the preliminary evaluation. The same rationale for selecting the sample depth intervals used during the preliminary evaluation was applied during the interim subsurface investigation. However, samples collected from the 5 to 5.5 ft depth interval during the interim subsurface investigation were analyzed immediately by the laboratory instead of being placed on hold. The boring locations for the 49 soil samples collected in the Bell Terminal Tank Farm area were concentrated along the east-west trending pipeline located in the center of the Bell Terminal Tank Farm area. This area was targeted because this pipeline was formerly used to convey petroleum products, and leaks or breaks along the pipeline, if any, could have resulted in contamination of the underlying soil. Therefore, the pipeline was considered a potential contaminant source. Also, diesel-range and gasoline-range petroleum hydrocarbons were detected in the groundwater sample collected at the temporary well point (GW23-1) located along this pipeline (Figure 2-11) during the preliminary evaluation. The locations of the other

five soil samples were selected with the intent of being able to eliminate or better define the specific area(s) where soil contamination exists in grids 2, 12, 13, and 21.

The results of the interim subsurface investigation confirmed that, in the western portion of the Main Terminal, the confining unit becomes thinner and eventually becomes discontinuous layers of silt and no longer acts a confining unit. The investigation also indicated that, although diesel-range and motor oil-range petroleum hydrocarbons are present in the surface or shallow soil in the Bell Terminal Tank Farm area, surface or shallow soil contamination does not appear to be widespread nor does the contamination appear to be present at elevated concentrations. The investigation did, however, indicate that in the area sampled, the higher concentrations of diesel-range and gasoline-range petroleum hydrocarbons are present in the capillary fringe soil.

Following the interim subsurface investigation, the following soil data gaps remained:

- The horizontal extent of soil contamination within the capillary fringe in grids (3, 8, 9, 14, 22, and 23) was not yet well defined
- Potential source area(s) of contamination in the capillary fringe soil in the Main Terminal Tank Farm area remained to be identified
- The horizontal extent of surface soil contamination within the eastern portion of the Phase III study area (specifically grids 7, 10, 11, 15, 17, and 19) had not yet been well defined.

The CPT exploration techniques and sample collection methods for the interim subsurface investigation are described in detail in the Phase III interim subsurface investigation technical memorandum (Landau Associates 2003d)]. Laboratory analyses performed for each soil sample are summarized in Table 5-2.

## 5.1.3 FINAL STAGE

The final stage of the Phase III RI was performed during September and October 2003 and during October and November 2004. For this investigation, soil samples were collected from the following locations:

- Thirty-three soil borings drilled for Phase III monitoring wells (LW-19S, LW-20S, LW-20D, LW-21S, LW-22D, LW-23D, LW-24D, LW-25D, LW-26D, LW-27S, LW-27D, LW-28S, LW-29S, LW-29D, LW-30S, LW-30D, LW-31S, LW-32S, LW-32D, LW-33S, LW-34S, LW-35D, LW-36D, LW-37D, LW-38D, LW-39D, LW-40S, LW-40D, LW-41S, LW-42S, LW-43-S, LW-44S, and LW-45D; these are described further in Section 5.2)
- Five soil borings (HB-01 through HB-05) drilled near three sets of parallel conveyance/manifold pipes that trend northeast-southwest through the Main Terminal Tank Farm area
- Fifteen hand-dug holes located in the eastern portion of the Phase III study area (identified as sample locations G7-03, G7-04, G7-05, G10-4, G10-5, G11-3, G15-4, G15-5, G15-6, G17-4,

G17-5, G17-6, G19-3, G19-4, and G19-5); location G10-4 was moved approximately 75 ft directly south from its original planned location due to road base material at the originally planned location

• Two hand-dug holes located in the southeast portion of the Bell Terminal Tank Farm area (identified as sample locations G27-4 and G27-5).

The Phase III soil sample locations are shown on Figure 2-7. The soil samples collected during this investigation were collected with the purpose of filling data gaps identified based on results of the interim subsurface investigation described in Section 5.1.2 above. Soil sample collection procedures were conducted in accordance with the Phase III work plan (Landau Associates 2001a). Logs for each soil boring or well borehole are provided in Appendix A of this report.

The purpose of the hand-dug soil borings (HB-01 through HB-05) was to evaluate whether the three sets of conveyance/manifold pipes that trend northeast-southwest through the Main Terminal Tank Farm area may have been a source of soil contamination in the Main Terminal Tank Farm area and to better define the extent of contaminated soil in preliminary evaluation sampling grids 8 and 9. Soil sample results from these borings will be used to evaluate the potential for surface spills along this pipeline due to potential leaks or breaks while the pipelines were in operation. The borings were drilled using direct-push hand-probe equipment operated by Cascade Drilling, Inc. (Portland, Oregon). Using the same sample depth interval rationale as used for the preliminary evaluation and the interim subsurface investigation, soil samples were collected for chemical analyses at the hand-probe borings at the following depth intervals: 1 to 1.5 ft BGS, 5 to 5.5 ft BGS, and within the capillary fringe. No samples were collected from the 0 to 0.5 ft depth interval, as recommended in the interim subsurface investigation technical memorandum, because during drilling it was observed that at least 0.5 ft of imported sand covered the area where these borings were drilled. Soil samples from 0.5 ft to 1.0 ft were also collected at each of these soil boring locations. Samples from this depth interval were archived pending results of samples collected from the lower depth intervals. Each of the samples collected were analyzed for dieselrange and gasoline-range petroleum hydrocarbons (Methods NWTPH-Dx and NWTPH-Gx); BTEX, MTBE, 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, isopropylbenzene and n-propylbenzene (EPA Method 8260); PAHs (EPA method 8270); and lead and zinc (EPA Method 6010). Laboratory analyses performed for each soil sample collected from the hand-probe borings are also summarized in Table 5-2.

The Phase III monitoring well soil samples were collected continuously for lithologic purposes and to check for the presence or absence of non-aqueous phase liquid (NAPL). At paired monitoring well locations, the boring for the lower zone monitoring well was drilled and installed first, followed by the boring for the upper zone monitoring well. To verify the upper zone well depth and screened interval,

soil samples were collected during drilling of the upper zone well near the estimated top of the confining unit based on the lithologic information collected during drilling of the boring for the lower zone well. At monitoring well pair LW-27S/27D, the upper zone monitoring well was installed first, because the thickness or presence of the confining unit along the presumed confining unit boundary was unknown and also due to the presence of NAPL within the soil samples. At monitoring well pair LW-40S/40D, the upper zone monitoring well was installed first, because the Oregon Water Resources Department (OWRD) required that the step-down procedure used for drilling the lower zone well be performed using slightly larger diameter augers, which required mobilization of a larger drill rig and delay of well installation. Soil samples for chemical analysis were collected from within the capillary fringe at each monitoring well soil boring, except at the well pairs where soil was only collected from one of the well borings. The capillary fringe was encountered at depths ranging between 12.5 to 16 ft BGS at most locations, except at wells LW-40S, LW-40D, and LW-45D. These wells are located on an approximate 5-ft high berm along the northern perimeter of the Main Terminal Tank Farm area, therefore, the capillary fringe at these locations was encountered at a depth of 21 ft BGS. Soil samples were also collected from the 0 to 0.5 ft depth interval, the 1 to 1.5 ft depth interval, and the 5 to 5.5 ft depth interval at soil borings for monitoring wells LW-41S, LW-42S, LW-43S, and LW-44S located in the Bell Terminal Tank Farm area. All of the soil samples from the 0 to 0.5 ft and the 1 to 1.5 ft depth intervals were submitted for laboratory analysis. The samples collected from the 5 to 5.5 ft depth intervals were archived and analyzed only if results for the samples from the upper most depth intervals indicated an increasing concentration trend with depth. Only one archived sample from this depth interval (collected at boring LW-42S) was analyzed. Laboratory analyses performed for each soil sample collected from monitoring wells soil borings are summarized in Table 5-2.

Shallow soil samples were collected from hand-dug holes within the eastern portion of the Phase III study area and the southeast portion of the Bell Terminal Tank Farm area to better define the specific area(s) where surface or shallow soil contamination exists within a preliminary evaluation sampling grid. For example, elevated concentrations of PAHs were detected in the composite surface soil sample at Grid 7. However, one of the subsample locations was near a historical roadway. To determine if the elevated concentration of PAHs could be attributed to the oiling of historical roadways, a discrete surface soil sample (G07-05) was collected adjacent to one of the previous subsample locations (G07-02). Also, to more adequately characterize the soil within the grid, discrete surface soil samples were collected at two other locations within the grid (G07-03 and G07-04). At each location, samples were collected from the 0 to 0.5 ft BGS depth interval. Samples were also collected from the 0.5 to 1.0 ft and 1.0 to 1.5 ft depth intervals and archived at the laboratory for potential analyses, depending on the results for the surface

sample location. The samples were collected from holes dug using hand-held implements (shovels, picks, post-hole diggers, etc.).

Recommendations for analyses to be performed for each soil sample were included in the interim subsurface investigation technical memorandum and were based on constituents previously detected in the associated preliminary evaluation grid sample. The analyses performed for each sample are as follows:

- At locations G7-03, G7-04, G7-05, G11-3, G15-4, G15-5, G15-6, G17-4, G17-5, G17-6, G19-3, G19-4, and G19-5, the samples collected from the 0 to 0.5 ft depth interval were analyzed for PAHs, lead, and zinc. Samples collected from the 0.5 to 1.0 ft and 1.0 to 1.5 ft depth intervals were archived.
- At locations G10-4 and G10-5, the 0 to 0.5 ft depth interval samples were analyzed for PAHs, lead, and zinc analyses. The samples collected from the 1.0 to 1.5 ft depth interval were analyzed for PAHs only. No samples were collected from the 0.5 to 1.0 ft depth interval.
- At locations G27-4 and G27-5, the soil samples were only collected from the 0 to 0.5 ft interval and analyzed only for PAHs.

Laboratory analyses performed for each soil sample are also summarized in Table 5-2.

### 5.2 GROUNDWATER INVESTIGATION

This section describes the groundwater investigations conducted for the Phase III RI, including installation and groundwater sampling of temporary well points and permanent monitoring wells, and measurement of groundwater levels.

#### 5.2.1 TEMPORARY WELL POINTS

The Phase III RI groundwater investigation included installation and sampling of 23 temporary well points during the preliminary evaluation, collecting split groundwater samples at 5 temporary well points, installation and sampling of 10 temporary well points and estimating static groundwater levels at 24 CPT locations during the interim subsurface investigation, installation and development of 33 permanent monitoring wells in the Phase III study area, and collection of groundwater samples from 46 permanent monitoring wells. The Phase III RI temporary well locations, Phase III RI permanent monitoring well locations, and Phase II monitoring well locations are shown on Figure 2-11. Prior to the Phase III RI groundwater investigation approximately 50 monitoring wells already existed in portions of the Phase III study area. None of these existing wells, however, were located in the Bell Terminal Tank Farm area.

The purpose of collecting groundwater samples from temporary well points during the preliminary evaluation was to identify locations within the Phase III study area where contaminated groundwater is present and to facilitate the placement of the additional permanent monitoring wells such that long-term monitoring for contaminant migration can be performed. To achieve this goal, the temporary well points were located in areas of the Main Terminal where monitoring wells did not already exist and, because no monitoring wells were present in the Bell Terminal Tank Farm area, temporary well points were spatially distributed throughout that area. In some cases, the temporary well points in the Main Terminal Tank Farm area were purposely located adjacent to or downgradient from potentially impacted areas identified in Table 2-5. For example, GW2-2 and GW8-1 were located adjacent to or downgradient from potentially impacted area B12. This was the approximate area potentially impacted by a diesel spill that occurred in 1979 as a result of a split in tank 29508. Temporary well point GW4-1 was located downgradient of potentially impacted area B4 where three USTs and the associated dispensers were formerly located. Temporary well point GW17-1 was located downgradient of the potentially impacted area B7 where a railroad car loading rack was formerly located.

In addition to the 27 well points installed as part of the preliminary evaluation, 7 temporary well points were installed by Schnitzer at locations located on Time Oil property just west of the Bell Terminal Tank Farm area. These locations (SCH-56, SCH-57, SCH-59, SCH-60, SCH-61, SCH-62, and SCH-63) are shown on Figure 2-7. Schnitzer collected groundwater samples from each of the temporary well points using a peristaltic pump. The groundwater samples collected by Schnitzer were analyzed for diesel-, lube oil-, and gasoline-range petroleum hydrocarbons, SVOCs, and VOCs. The analytical results are presented in Table 5-3. Landau Associates collected split groundwater samples at five of the locations for Time Oil. All of the split groundwater samples collected by Landau Associates were analyzed for diesel- and lube oil-range petroleum hydrocarbons and, except for one sample, were analyzed for gasoline-range petroleum hydrocarbons. Two of the split groundwater samples were also analyzed for VOCs. The results for the split groundwater samples are also shown in Table 5-3. A comparison of the split groundwater sample results with the Schnitzer groundwater sample results indicates some variability between the results, as discussed previously (i.e., the relative percent difference between the diesel-range petroleum hydrocarbon results ranged from about 40 to 147 percent). The variability in sample results is likely due to the fact that these samples were collected directly from a borehole, instead of a monitoring well, which resulted in turbid samples. Suspended material in the groundwater sample may cause variability in the results due to contaminants adsorbed to the suspended material and, therefore, a reflection of the heterogeneity in the concentrations in the suspended soil.

During the interim subsurface investigation, discrete groundwater samples were collected from 10 temporary well points located along the east-west trending pipeline located in the center of the Bell

Terminal Tank Farm area. As mentioned in Section 5.1.2, the pipeline was formerly used to convey petroleum products. The groundwater samples were collected to determine the impacts on groundwater, if any, due to this pipeline.

### 5.2.2 PERMANENT MONITORING WELLS

Nineteen monitoring wells were installed in the Main Terminal Tank Farm area as part of the Phase III RI. These included:

- Two wells screened in the upper zone (LW-19S and LW-21S)
- Seven wells, located in the western portion of the Main Terminal where the confining unit is discontinuous or absent, and screened across the first water-bearing zone (LW-22D, LW-23D, LW-24D, LW-25D, LW-26D, LW-35D, and LW-45D)
- Four wells installed along the Willamette River shoreline where the confining unit is discontinuous or absent, and screened across the first water-bearing zone (LW-36D, LW-37D, LW-38D, and LW-39D)
- Three well pairs each with a well screened in the lower and upper zones (LW-20S/20D, LW-27S/27D, and LW-40S/40D).

Twelve of the wells in the Main Terminal Tank Farm area were installed in September and October 2003. Seven of the wells, including those located along the Willamette River shoreline, were installed in November 2004. The placement of wells adjacent to the northern property boundary (LW-40S, LW-40D, and LW-45D) and along the western portion of the Main Terminal Tank Farm area (LW-22D, LW-23D, LW-24D, LW-25D, and LW-35D) was to characterize groundwater at the perimeter of the Main Terminal Tank Farm area. Monitoring wells were not installed along the southern tank farm perimeter during the Phase III RI because several upper zone and lower zone wells had been previously installed in this area as part of the Phase II RI. Monitoring wells were also installed in the central portion of the Main Terminal Tank Farm area (LW-19S, LW-20S, LW-20D, LW-21S, LW-26D, LW-27S, LW-27D) because analytical results for samples collected from the temporary well points indicated the presence of diesel-range and gasoline-range petroleum hydrocarbons and related constituents in the groundwater below the Main Terminal Tank Farm area. Well LW-19S was originally planned to be a lower zone monitoring well near the edge of the confining unit in the northern portion of the Main Terminal Tank Farm area, based on the geologic conceptual model reported in the Phase III subsurface investigation technical memorandum. During drilling at this monitoring location, the confining unit was encountered at 19 ft BGS. Instead of installing a lower zone well at this location, an upper zone well was installed to characterize hydrogeologic conditions in the upper zone near the estimated boundary of the

confining unit. An additional monitoring well, LW-35D, was subsequently installed to the northwest of LW-19S to characterize the lower zone in this portion of the Terminal.

Sixteen monitoring wells were installed in the Bell Terminal Tank Farm area as part of the Phase III RI, including:

- Eight wells screened in the upper zone (LW-28S, LW-31S, LW-33S, and LW-34S, LW-41S, LW-42S, LW-43S, and LW-44S)
- Three well pairs each with a well screened in the lower and upper zones (LW-32S/32D, LW-29S/29D, and LW-30S/30D).

Twelve of the wells in the Bell Terminal Tank Farm area were installed in September and October 2003. Four of the wells, LW-41S, LW-42S, LW-43S, and LW-44S were installed in November 2004. The locations of the initial 12 wells were selected to provide hydrogeologic information necessary to estimate groundwater flow patterns in the Bell Terminal Tank Farm area and to monitor for contaminants in groundwater. Initially, four wells (two sets of nested wells: LW-29S/29D and LW-30S/30D) were installed along the western property boundary of the Bell Terminal Tank Farm area to determine if contaminants previously detected in groundwater from temporary well point locations (SCH-61 and SCH-63B) are migrating from the property or onto the property in this area. Two additional upper zone monitoring wells (LW-41S and LW-42S) were later installed for additional information to better evaluate the potential migration of contaminants along this property boundary. Initially, one set of nested wells (LW-32S/32D) was installed along the east-west trending pipeline located in the center of the Bell Terminal Tank Farm area where diesel-range and gasoline-range petroleum hydrocarbons and related constituents were detected in groundwater samples collected from five temporary well points (BT-03, BT-04, BT-06, BT-08, and BT-09). A third monitoring well, LW-44S, was later installed in this area, as requested by DEQ. One upper zone well (LW-43S) was installed at a location between the western property boundary and the area along the pipeline in the central portion of the Bell Terminal to determine whether the concentrations observed in these two areas were contiguous. Monitoring well LW-33S was installed along the southern perimeter of the Bell Terminal Tank Farm area to monitor the migration of contaminants, if any, between the Bell Terminal Tank Farm area and the adjacent property to the south. Monitoring well LW-34S was installed in a location just downgradient of the former loading rack area (identified as biased sampling area B14 on Figure 2-11) to determine if former loading rack activities may have had an impact on groundwater. One well, LW-28S, was installed along the northern perimeter of the Bell Terminal Tank Farm area because the location was upgradient of any contamination detected during previous investigations.

Soil borings for each of the monitoring wells were drilled using a hollow-stem auger rig. Boreholes were drilled and the wells were constructed and installed in accordance with the Oregon

Administrative Rules (OAR) 690-240 and applicable DEQ guidance (DEQ 1992). Borehole drilling and monitoring well construction and installation were performed by Cascade Drilling, Inc., a licensed well driller in the state of Oregon. A summary of drilling and installation activities for the upper and lower zones monitoring wells are discussed in the following sections.

## 5.2.2.1 Upper Zone Monitoring Wells

The well borings for the upper zone monitoring wells extended to the top of the confining unit, or a maximum of 1 ft into the confining unit. The completed depths for the soil borings ranged from 14.0 ft to 24.0 ft BGS. The depth of the confining unit at each location was determined based on field observations of the soil samples collected continuously to the full depth of each boring (see Section 5.1).

Upper zone monitoring wells were constructed of flush-threaded 2-inch Schedule 40 PVC casing with PVC machine-slotted screen (0.020-inch). The well screens and casing were pre-cleaned using a hot pressure washer. Screen and well casing material were inspected for damage prior to installation. The screened interval for each well extended from near the top of the confining unit to a depth above or near the expected seasonal high water level. This required using a 10-ft well screen at all but four monitoring wells. Monitoring wells LW-20S, LW-28S, and LW-33S were constructed with 5-ft screens because of the thin saturated thickness of the upper zone at these locations. Monitoring well LW-27S was constructed with a 15-ft screen because of the thinning and overall greater depth of the confining unit at this location, which is near the western extent of the confining unit in the Main Terminal Tank Farm area.

Following placement of the well screen and casing in the borehole, a filter pack was installed around each well screen. The filter pack extended from the bottom of the end cap to a minimum of 2 ft above the screen. Filter pack material consisted of commercially prepared, presized, prewashed No. 10-20 Colorado silica sand. The filter pack was carefully placed down the annulus between the well casing and the auger flights or temporary steel casing, as the auger or casing was slowly withdrawn. During filter pack placement, the distribution and depth of the filter pack was monitored with a weighted tape. A 1-ft layer of commercially prepared fine sand (No. 20-40 Colorado silica sand) was placed above the filter pack.

A bentonite chip seal of at least 2-ft thick was placed above the sand pack to about 1 ft below the ground surface. The surface of each well was completed with a concrete seal and surface pad extending from the top of the bentonite seal to slightly above the surrounding ground surface. Locking steel monuments (aboveground and flush-mount) were cemented in place at the surface to a depth of about 3 ft BGS. At locations where aboveground monuments were installed, a 2x2-ft concrete pad with a minimum thickness of 4 inches was constructed around each well at the ground surface to divert rainfall away from the well casing and three bollards were cemented in place around each wellhead in accordance with OAR

690-240-110. Flush-mounted monuments were installed at locations where vehicular traffic precludes the use of an aboveground monument. The well construction details are presented with the boring logs in Appendix A of this report.

### 5.2.2.2 Lower Zone Monitoring Wells

Well borings for the lower zone monitoring wells extended at least 10 ft into the lower zone, except for wells installed along the shoreline of the Willamette River (beach wells). The beach wells were installed within the first encountered water-bearing unit (the upper zone does not exist in this area), but did not extend into a silt layer encountered at three of the wells (LW-36D, -37D, -39D) at about 10 to 12 ft BGS. Completed depths for the beach wells ranged from 10.2 to 16.5 ft BGS. (Note that ground surface elevations for these wells are approximately 20 ft lower than the wells installed along the riverbank and in the Main Terminal Tank Farm area.) Completed depths for the remainder of the lower zone wells ranged from 29.5 ft BGS to 44.5 ft BGS. Identification of the lower zone at each well location was determined based on field observations of soil samples collected continuously throughout the full depth of each boring (see Section 5.1).

As described in the Phase III work plan (Landau Associates 2001a), a step-down drilling procedure was used for the monitoring wells screened in the lower zone where the confining unit was encountered. This procedure was used to minimize the potential for carry-down of contaminants from the upper zone to the lower zone during drilling. The step-down procedure consisted of drilling to and partially into the top of the confining unit between the two groundwater zones using a 15-inch outside-diameter drill auger. The auger size was then reduced (stepped down) to a 9-inch outside-diameter auger for drilling through the confining unit and into the lower zone. Before drilling the 9-inch-diameter auger through the confining unit, approximately 5 ft of bentonite chips were placed in the borehole and allowed to hydrate for at least one hour. After hydration, the 9-inch auger was lowered into the borehole and drilling was continued through the silt layer to the desired total depth. The step-down procedure was used during drilling of soil boreholes for wells LW-20D, LW-26D, LW-27D, LW-29D, LW-30D, LW-32D, and LW-40D. No step-down procedure was used for drilling boreholes for wells LW-22D, LW-23D, LW-24D, LW-25D, LW-35D, and LW-45D located within the Main Terminal Tank Farm area because the confining unit was not encountered or the thickness of the silt layer was less than 0.5 ft at these locations.

Lower zone monitoring wells were constructed of flush-threaded 2-inch Schedule 40 PVC casing with PVC machine-slotted screen (0.020-inch). The well screens and casing were pre-cleaned using a hot water pressure wash. Screen and well casing material were inspected for damage prior to installation. All but two of the lower zone monitoring wells installed at locations where the confining unit is present were

screened over a 10-ft interval that extended from the base of the confining unit into the lower zone. Monitoring wells LW-26D and LW-40D were screened over a 5-ft interval to allow for the screened portion of the well to be placed in predominantly sand where silt layers existed. At wells located beyond the extent of the confining unit, a 15-ft screen interval was used to screen across the expected seasonal high and low water elevations, except for the beach wells. For these wells, the screened interval ranged from 4 to 10 ft. As discussed above, a silt layer was encountered at about 10 to 12 ft BGS in three of the wells located on the shoreline of the Willamette River; therefore, the screen length and screen position were chosen so that the base of the well was installed above the silt layer. The screen interval was installed to extend 2 to 3 ft above the water level at the time of drilling for account for seasonal fluctuations.

Following placement of the well screen and casing in the borehole, a filter pack and bentonite seal, concrete seal and surface pad, and locking steel monument (aboveground or flush-mount) were installed using the same procedures described for the upper zone monitoring wells. The well construction details are presented with the boring logs in Appendix A.

### 5.2.3 WELL DEVELOPMENT

Each monitoring well was developed after the final grout (or bentonite chips) had been allowed to hydrate in the well annulus for a minimum of 24 hours. Development was accomplished using a centrifugal pump and the procedures described in the Phase III work plan. Development continued until at least 5 to 10 casing volumes were removed and turbidity of the discharged water was visibly low. Groundwater sampling did not occur at the wells less than 48 hours following development.

## 5.2.4 WATER LEVEL MEASUREMENTS

Prior to groundwater sampling, groundwater levels were measured and the presence of NAPL was checked at each monitoring well. Groundwater level measurements were taken from a marked survey point or at the top of the PVC well casing or from the north side of the top of the PVC well casing and recorded to the nearest 0.01 ft. Measurements in the Willamette River were taken from a surveyed PK nail with washer located on the south side of the dock.

# 5.2.5 GROUNDWATER SAMPLING

Groundwater samples were collected from the scheduled monitoring wells during the quarterly events, except where the wells contained product or when the wells were dry. A record of conditions at

the time of sampling is provided in Section 6.0 Table 6-1 and in Section 7.0 Table 7-3. Groundwater monitoring locations are shown on Figure 2-1.

Analytical results and groundwater sampling procedures for the combined Phase II/III quarterly sampling events are provided in the respective quarterly reports (Landau Associates 2004a,b,c and 2005 a,b) and are evaluated in Section 7.0 of this report.

#### **5.2.5.1** Groundwater Chemical Analyses

Groundwater samples collected during the fourth quarter 2004 were analyzed for the following constituents: SVOCs (EPA Method 8270); VOCs (EPA Method 8260), including methyl tert-butyl ether (MTBE) at well LW-7S; PCP (EPA Method 8270 SIM); six priority pollutant metals (arsenic, chromium, copper, lead, nickel, and zinc; EPA Methods 6010/7000 series); total dissolved solids (TDS; EPA Method 160.1); chloride (EPA Method 325.2); gasoline-range TPH (NWTPH-G); diesel-range and motor oil-range TPH (NWTPH-Dx), and field parameters (pH, conductivity, dissolved oxygen, turbidity, and temperature). Additionally, select wells were sampled for ferrous iron (EPA Method SM3500); selenium (EPA Method 6010); benzene, ethylbenzene, toluene, and xylenes (BETX); and dioxins and furans (EPA Method SW8290) for monitoring of the ISCO events. PCP analyses using EPA Method 8270 SIM was also conducted on samples where PCP was not detected above the reporting limit using EPA Method 8270. The laboratory analyses were conducted by Specialty Analytical Inc., located in Tualatin, Oregon, except as follows: laboratory analyses prior to the first quarter 2004 event and the ferrous iron analysis were conducted by Analytical Resources, Inc. (ARI) located in Tukwila, Washington; dioxin/furan analyses were conducted by Columbia Analytical, Inc. in Houston, Texas.

#### **5.2.6 SURVEY**

Soil sampling locations and temporary well point sampling locations for the Phase III investigations were surveyed by using a global positioning system instrument (GPS), or by taped measurements. Permanent monitoring wells were surveyed using a licensed surveyor (ZTec Engineers of Portland, Oregon). All surveying conducted by the licensed surveyor and/or GPS included the collection of horizontal coordinates (x,y) using the Oregon State Plane coordinate system (NAD 86), and ground surface elevations using MSL datum. Additionally, the elevation of the top of PVC casing and the top of the protective well monument at each of the permanent monitoring wells was surveyed by the licensed surveyor and used as water level measurement reference points. Surveyed reference elevations for each Phase III monitoring well are provided in Table B-1.

## 5.2.7 RESIDUAL WASTE MANAGEMENT

Investigation-derived wastes including soil, purge water, and decontamination water generated during all activities for the Phase III RI conducted to date were disposed or treated as follows:

- Soil: Soil cuttings generated from direct-push borings drilled during the Phase III preliminary evaluation and interim subsurface investigation were disposed at the Swan Hills incineration and disposal facility in Alberta, Canada with the soil stockpile and PCP mixing area soil. Soil generated from the Phase III RI hand probe borings and soil cuttings from the installation of the Phase III monitoring wells was temporarily stockpiled in two lined and covered areas onsite (south-southwest of tank 80014 in the Main Terminal Tank Farm area and southeast of tank 80009 in the Bell Terminal Tank Farm area). The temporary stockpiles were removed on February 19, 2004 and February 14, 2005 and thermally treated and disposed at TPS Technologies in Tacoma, Washington. Disposal documentation is on file at the environmental offices of Time Oil in Seattle, Washington.
- Purge and Decontamination Water: Water generated during the sampling of temporary well points, development and sampling of the permanent monitoring wells, and the decontamination of equipment used during the Phase III investigation was transferred directly to the onsite wastewater treatment system for treatment.

# 5.3 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

The quality assurance and quality control (QA/QC) procedures that were used during the investigations for the Phase III RI were conducted in accordance with the Quality Assurance Project Plan (QAPP; Landau Associates 2001a; Appendix C). These QA/QC procedures included collection and analysis of samples that provided a consistent and predetermined level of precision and accuracy, completeness, representativeness, and comparability/compliance with project data quality objectives; specific QA/QC procedures for sample collection and handling; analytical protocols for analytical laboratories; the use of QC samples; and data validation procedures. As a result of the QA/QC procedures, the Phase III RI data were determined to be adequate for risk assessment evaluations and for future decisions on selection of a remedy for soil and groundwater at the Terminal.

## 5.4 DATA VALIDATION

The results of all chemical analyses underwent a data quality evaluation or data validation. The data quality evaluations were performed in accordance with the QAPP and with applicable portions of the EPA guidance (EPA 1994a, b).

The evaluations considered the following elements:

- Chain-of-custody records
- Holding times
- Blank results (laboratory, method, and field)

- Surrogate recoveries
- Laboratory matrix spikes and matrix spike duplicates (MS/MD) (including laboratory control samples)
- Duplicate analyses (field and laboratory)
- Quantitation limits
- Completeness.

Data precision was evaluated through laboratory, field, and matrix spike duplicates. Data accuracy was evaluated through laboratory control samples, surrogate spikes, and matrix spikes. Data qualifiers were assigned, as necessary, during the data quality evaluations in accordance with EPA guidelines and data quality objectives established for this project. Data qualifiers that were assigned during data validation are defined within the footnotes of the tabulated analytical data provided in Appendices C and D.

Data summary tables, data validation report, and laboratory data reports for the September/October 2003 and October/November 2004 Phase III RI soil investigations are provided in Appendices E, F, and G, respectively. The data validation report and laboratory data packages for the quarterly groundwater events are provided with the respective quarterly reports (Landau Associates 2004a,b,c and 2005a,b). All other data discussed herein have been provided with previous submittals.

#### 5.4.1 DATA PROCESSING AND MANAGEMENT

Data collected during the Phase III RI were processed and managed using a project database (GIS\Key). Additionally, other computer software, including AutoCad, gINT, and Excel were used for evaluation and presentation of the data. Each Phase III RI sample was identified based on the sample location number and depth, as applicable. Field quality control samples (e.g., field duplicates, equipment blanks, etc.) and field parameter measurements (e.g., temperature, pH, specific conductance, dissolved oxygen) were documented on the sample collection forms, and analyses requests were identified from the chain-of-custody forms. Analytical laboratory results were provided in electronic format from the laboratory and were transferred directly into the project database. On occasion, due to small analysis volume, data entry was conducted manually. All entries, whether electronic or manual, underwent a quality assurance check before data quality evaluation or any other type of data analysis was conducted. After the data validation was completed, any data qualifiers were added to the project database.

Data used for graphical presentation or analytical evaluations in AutoCad and Excel originated from the project database after quality assurance checks were complete. Data entered into gINT for the boring logs and well construction information were entered manually based on information recorded in the field on the log of exploration and well completion forms. Each data entry and formula used for the

graphical illustrations, spreadsheets, or statistical evaluations was spot-checked again before final data analyses were conducted. Some contour maps were prepared by hand with some initial plots drawn by GIS\Key when the interpretations by the contouring software did not provide an accurate representation of the data considering knowledge of the conceptual site model.

# 6.0 GEOLOGY AND HYDROGEOLOGY

This section describes the geology and hydrogeology at the Terminal, as interpreted from the data collected during the site Phase II RI and Phase III RI. The information provided in this section constitutes the geologic/hydrogeologic conceptual site model as it has been refined since previous reports (Landau Associates 1999b, 2001b). This information has also been used to evaluate the potential for contaminant migration, as discussed in Section 8.0. Descriptions of the regional geologic and hydrogeologic settings were provided previously in Section 3.0.

## 6.1 LOCAL GEOLOGY

The local geology at the Terminal was interpreted from lithologic descriptions of subsurface soil collected during drilling of soil borings and monitoring wells, historically and during the Phase III RI; boring logs from adjacent properties; and regional geologic information (see Section 3.2). Available boring logs from historical and Phase II RI locations, general soil profiles for different areas of the Terminal based on data collected during the Phase III preliminary evaluation, boring logs from the Phase III interim subsurface investigation, and boring logs from the September/October 2003 and October/November Phase III investigations are provided in Appendix A. Except for the 2003 and 2004 investigations, these logs were provided with previous transmittals.

The Terminal is located on sand fill within the floodplain of the Willamette River. Prior to development of waterfront facilities, this region was characterized by alluvial river deposits consisting of sand and silt deposited by a series of braided channels, lowlands, and marshes. The Willamette River channel has historically, and in the present, been dredged to facilitate transport and moorage of shipping vessels for various industries along the riverfront. It is likely that the shallow soil at the Terminal consists partly of historically dredged fill material that was placed in the upland areas. Historical aerial photographs from the late 1930s indicate that prior to construction of the Terminal the geomorphology of the area can be characterized as river floodplain (Figures 2-12 and 2-13). There are no apparent features either natural (e.g. historic river channels or surface water bodies) or manmade that would have an effect on contaminant transport.

As shown on Figures 3-1 and 3-2, the local geology at the Terminal can be inferred from the regional geologic information. A description of the local geologic units observed or anticipated to be present at depth beneath the Terminal based on this data is provided below (from youngest to oldest):

• Fill (Qaf) - River deposits resulting from historic dredging of the Willamette River were likely used as fill material during land development at the Terminal; however, it is unknown whether this material constitutes all the fill at the Terminal or whether the fill in some areas (i.e., East Property) was simply regraded material from elsewhere on the property. The

surficial soil at the Terminal is predominantly fill material comprised of fine to medium sand with little silt. The fill material is generally indistinguishable from the uppermost alluvial sand that extends to about 20 ft BGS.

- Alluvium (Qal) Alluvial sand and silt deposits are exposed at the surface or underlie the fill at the Terminal. This unit presumably was deposited as overbank or channel alluvium of the ancestral and recent Willamette River channel. Geologic information collected during investigations at the Terminal suggest that thick sequences of alluvial sands, silty sands, and silts are present beneath the Terminal to depths of at least 100 ft BGS.
- Catastrophic Flood Deposits (Qff) These flood deposits were not observed at the Terminal, but exist at the surface as terraces in adjacent areas southeast of the Terminal, as shown on Figure 3-1. It is expected that, where they exist, they directly overlie the Troutdale Formation.
- Troutdale Formation (Tt) Based on a boring log for a well owned by the Port of Portland, located about 2 miles northeast of the Terminal, the top of the Troutdale Formation is about 165 ft BGS. Silts and sands above the Troutdale Formation in this area indicate infilling of the ancestral channel with alluvium (Qal). Beeson et. al. (1991) reports that the Troutdale Formation deposits have been scoured by an ancestral Willamette River, shown on Figure 3-1. Subsurface explorations conducted to date at the Terminal have not encountered the Troutdale Formation.
- Sandy River Mudstone (Tsr) Published geologic reports suggest that the Sandy River Mudstone deposits can be found at depths of more than 300 ft beneath the Terminal (Beeson et. al. 1991); however, no site-specific subsurface data to that depth are available to confirm the presence of these deposits.
- Columbia River Basalt Group (Tcr) Published maps suggest that the CRBG deposits are present at depths of 300 to 450 ft beneath the Terminal (Beeson et. al. 1991; Madin 1994). However, no wells east of the Willamette River in the immediate vicinity of the Terminal have penetrated the overlying sedimentary deposits to the CRBG.

The geologic units encountered at the Terminal include the fill and alluvium.

# 6.2 LOCAL HYDROGEOLOGY

Based on similar geologic soil types and hydrogeologic characteristics, four principal near-surface hydrogeologic units have been identified at the Terminal. In descending order from ground surface, these units include: 1) an upper zone, 2) a confining unit, 3) a lower zone, and 4) a deep sand unit. As described in the following sections, depending on the continuity of the confining unit, the hydrogeologic units can act as distinct aquifer units with unconfined conditions in the upper zone and confined to semiconfined characteristics in the lower zone, or act as a single unconfined aquifer (beyond the extent of the confining unit). Figure 6-1 shows the location of 12 cross sections of the Terminal that illustrate the relationship between these units. The cross sections are presented on Figures 6-2 through

6-13. The interpretation of local geology and hydrogeology, as represented on the cross sections, was developed from several sources (i.e., soil and well boring logs, and CPT logs). Information from explorations with frequent sampling, such as the CPT, was weighted more heavily than information from explorations with less frequent sampling. The hydrogeologic units shown on the cross sections correlate with soil types identified within the fill and alluvium geologic units (see Section 6.1). More detailed descriptions of the hydrogeologic units are provided in the following sections.

#### 6.2.1 UPPER ZONE

The upper zone at the Terminal occurs in the surficial and fill material alluvial sands. The soil is described as a brown to gray, fine- to medium-grained sand with occasional silt and gravel layers. Based on physical testing, silt content in this zone ranges from less than 5 percent to about 25 percent. The alluvial sand is reported to be mostly continuous throughout the Willamette River floodplain.

Hydrostratigraphic relationships and groundwater level data indicate that the upper zone appears to be an unconfined aquifer that is discontinuous in areas where the underlying confining unit is absent (e.g., toward the Willamette River). The top of the upper zone is defined by the shallow water table and, therefore, varies based on seasonal fluctuations. The base of the upper zone ranges from 10 to 20 ft BGS. The average saturated thickness of the upper zone varies from less than about 1 ft along the confining unit boundary to slightly less than 15 ft at wells located in the Main Terminal Tank Farm area. The variability in the upper zone water levels and, thus, the saturated thickness of the zone, generally is characterized by seasonal high water levels in the winter and spring and seasonal low water levels in the summer and fall. Currently, there are 50 Phase II and Phase III shallow wells, well points, and piezometers (including horizontal recovery well HRW-1 and ISCO wells OX-1S through OX-8S) installed within the upper zone at the Terminal.

#### 6.2.2 CONFINING UNIT

A silt to sandy silt unit of variable thickness and areal extent separates the upper and lower zones across most of the Terminal. The silt unit appears to act as a confining or semi-confining layer for the lower zone. The silt unit consists of material that is characteristic of natural river overbank deposits, is heterogeneous, and varies in thickness across the site from less than 1 ft to about 30 ft. The confining unit is thickest in the eastern portion of the Main Terminal Tank Farm area and the Bell Terminal Tank Farm area, and thins as it extends westward in the Main Terminal Tank Farm area and as it extends westward and southward of the Bell Terminal Tank Farm area, as illustrated on the cross-sections (Figures 6-2 through 6-7, and Figure 6-11). In the western portion of the Main Terminal, as the confining unit

becomes thinner, it eventually becomes discontinuous layers of silt and no longer acts as a confining unit between the upper and lower zones. Based on soil boring logs and groundwater elevation data collected on the former PEO property, the confining unit presumably also appears to thin and becomes discontinuous on the eastern portion of the PEO property (Bridgewater 2001; Bridgewater 2002; URS 2002; Gradient 2003); however, boring logs are not available for all of the well locations on this property. The approximate boundary of the extent of the continuous confining unit is shown on Figure 6-1.

Where present at the Terminal, the uppermost boundary of the confining layer is encountered at about 16 to 20 ft BGS (8 to 13 ft elevation, MSL). Where the silt layer is not present (i.e., along the western portion of the Main Terminal at wells LW-22D through LW-25D, LW-6D, and LW-9D), the upper zone does not exist and the lower zone acts as a single unconfined groundwater zone.

Constant head permeability tests conducted during the Phase II RI on silt from the confining layer at well locations LW-1D, LW-3D, and LW-4D indicate that average vertical hydraulic conductivities range between  $1.4 \times 10^{-6}$  to  $2.4 \times 10^{-6}$  cm/sec, which is within the typical range of values for silt (Freeze and Cherry 1979).

#### 6.2.3 LOWER ZONE

The lower zone occurs in interlayered river channel and overbank deposits. This material is characterized by gray, fine to medium, sand to silty sand with multiple discontinuous interlayers of silt up to 6 ft thick. In areas where the overlying confining unit is present, the lower zone generally displays semi-confined to confined aquifer characteristics. In areas where the confining unit is absent (i.e., western portion of the Main Terminal and presumably on the former PEO property), the lower zone appears to act as a single, unconfined aquifer. Where both water-bearing zones are present, the lower zone does not appear to be hydraulically connected with the upper zone, except along the edge of the confining unit over most of the Terminal and downgradient of the PCP mixing area, where the upper and lower zones appear to be interconnected based on the presence of PCP in both zones historically. As discussed in Sections 6.3 and 6.4, the hydrogeologic characteristics of the upper and lower zones (e.g., hydraulic conductivity, yield) and contaminant distributions vary throughout the units. Based on local stratigraphic data, the lower zone ranges in thickness from about 15 to 40 ft, depending on the continuity of the underlying silt layers. Where the underlying silt layers are continuous, they likely separate the lower zone from a deeper sand unit. Where the silt layers are discontinuous, the lower zone is likely in hydraulic connection with the deeper sand unit. Currently, there are 36 Phase II and Phase III wells (including recovery well RW-2) installed in the lower zone at the Terminal. Sixteen of these wells are installed in the area beyond the extent of the confining unit where the lower zone acts as an unconfined aquifer.

# 6.2.4 DEEP SAND UNIT

The deep sand unit is encountered at about 60 to 65 ft BGS. The unit is differentiated from the overlying sand and silt of the lower zone because it predominantly consists of fine to medium sand with low silt content. In most areas, the deep sand unit is separated from the lower zone by thin silt layers. The deep sand unit extends to at least 100 ft BGS, but the extent of the unit and its hydrogeologic characteristics could not be evaluated based on data collected to date at the Terminal. One deep sand unit monitoring well was previously installed at the Terminal within the soil removal area for the former PCP mixing area, but was abandoned prior to soil removal activities. Currently, there are no monitoring wells installed in the deep sand unit at the Terminal.

# 6.3 UPPER ZONE HYDROGEOLOGIC CHARACTERISTICS

This section describes the hydrogeologic characteristics of the upper zone, including groundwater flow, seasonal trends, and hydraulic parameter estimates and groundwater velocities. The hydrogeologic characteristics of the upper zone were evaluated using pre-Phase II RI groundwater level elevation measurements collected from 1993 and 1996, quarterly Phase II RI measurements from March 1997 through November 2004, Phase II continuous water level monitoring and Phase II baseline monitoring during aquifer tests at recovery wells RW-1 and RW-2, and Phase III RI measurements collected from October 2003 through November 2004. The historical groundwater level measurements between 1993 and 1996 were generally collected on a monthly basis and were reported in the Phase II RI report. Continuous water level monitoring and baseline monitoring for the aquifer tests conducted during the Phase II RI are documented in the aquifer test report (Landau Associates 1999b). Quarterly Phase II/III groundwater level measurements since March 1997 are presented in Table B-1 (Appendix B).

Groundwater elevations in the upper zone measured in February and November 2004 during the quarterly groundwater sampling events have been contoured and are shown on Figures 6-14 and 6-15. These quarterly events were chosen because they represent seasonal variability in groundwater elevations in the upper zone, and include data for the Phase III monitoring wells from the November 2004 event. Groundwater elevation contour maps for the monitoring conducted since January 1998 have been provided to DEQ in the quarterly groundwater monitoring reports. Groundwater elevation data collected on the former PEO property has not been included in this report because the most recent data available is from January 2003, and therefore, are not comparable to the 2004 elevations presented in this report. However, the groundwater elevation data from the former PEO property were used to assess the

groundwater flow elevations and flow patterns relative to those observed at the Terminal to estimate the extent of the confining unit on the former PEO property.

#### 6.3.1 GROUNDWATER FLOW AND SEASONAL TRENDS

Phase II and Phase III RI groundwater elevation data indicate that, in general, horizontal groundwater flow in the upper zone within the developed area of the Terminal is consistently to the west/southwest toward the Willamette River. However, a localized shift in the groundwater flow direction to the south/southwest in the area near and including the former PCP mixing area likely reflects the influence of the east-west trending storm drain on groundwater flow. Monitoring wells on the East Property have been abandoned; however, historical groundwater levels measured in this area indicate that there is a localized change in the groundwater flow pattern such that the groundwater flow direction in this area is approximately radial away from the north-central property boundary (near LW-101S). Groundwater elevation maps showing this area are provided in quarterly reports prior to the third quarter 2003 event.

As previously discussed, the confining unit between the upper and lower zones thins and becomes discontinuous along the western portion of the Main Terminal. Groundwater elevations measured at wells located along this boundary reflect the change from two water-bearing zones (upper and lower) to a single unconfined water-bearing zone. For example, during the summer and fall months, well LW-10S and piezometers PZ-3 and PZ-4 are typically dry because they are located beyond the extent of the confining unit. Also, at Phase III RI well LW-27S, the water level is not typical of either a lower zone or upper zone water level, thereby indicating the edge of the confining unit and the transition from two groundwater zones to one. The groundwater flow patterns in this area mirror the western extent of the confining unit boundary and groundwater gradients increase sharply where groundwater from the upper zone flows over the confining unit boundary. In the area of the Bell Terminal Tank Farm area, wells LW-28S and LW-33S were dry during the November 2004 groundwater sampling event, and newly installed well LW-41S has been dry during the two quarterly events since installation. At wells LW-33S and LW-41S, the confining unit is likely thinner and discontinuous, as illustrated on Figure 6-9. Overall, the RI data to date show that the groundwater levels in the upper zone are influenced by seasonal variations in precipitation, but the groundwater flow patterns do not appear to vary significantly seasonally.

Hydrographs of water level elevations in the upper zone at selected wells (Figure 6-16) more clearly reflect the seasonal fluctuations, with seasonal lows during the fall months (October-November) and seasonal highs during the winter months (January-February). The hydrographs indicate that the upper

zone groundwater table surface fluctuates about 6 to 7 ft seasonally (between about 12 and 19 ft, MSL) for most of the monitoring wells. Figure 6-16 also shows that seasonal upper zone fluctuations generally correspond to seasonal fluctuations in the stage of the Willamette River.

Continuous water level data collected in February 1998 and May 1999 as part of the Phase II RI indicated that water levels in the upper zone do not appear to be directly influenced by semidiurnal fluctuations in the river stage.

Horizontal hydraulic gradients for the upper zone were calculated for four different areas of the Terminal: 1) the area between wells LW-7S and well P represents the northern portion of the Terminal where groundwater flow is generally directly west toward the Willamette River, 2) the area between wells D and LW-4S represents the central portion of the Terminal including the former PCP mixing area where groundwater flow is generally to the south/southwest, 3) the area in the central portion of the Main Terminal Tank Farm area near well LW-27S at the confining unit transition, and 4) the area between wells LW-32S and LW-31S, which represents the southern portions within the Bell Terminal Tank Farm area where groundwater flow is generally to the southwest. Average horizontal gradients range from about 0.006 to 0.067, with the greatest average gradients occurring in the central part of the Terminal at the confining unit boundary (0.067). Average gradients in the northern and southern parts of the Terminal are less and approximately equivalent (Table 6-1).

#### 6.3.2 HYDRAULIC PARAMETER ESTIMATES AND GROUNDWATER VELOCITIES

Aquifer parameters for the upper zone, including transmissivity (T), hydraulic conductivity (K), and aquifer storage (S) [e.g., specific yield ( $S_Y$ ) and storativity ( $S_A$ )] were estimated from data collected during Phase II RI activities for the Terminal. These included slug/bail tests at wells LW-1S and LW-11S and constant and variable rate pumping tests at recovery well RW-1 in May-June 1999. A detailed description of the slug/bail test, aquifer tests, and evaluation results are provided in the Phase II RI report (Landau Associates 2001b) and aquifer test report (Landau Associates 1999b).

The slug/bail test analyses results indicate that average K values in the upper zone range from about 40 ft/day at well LW-11S to about 160 ft/day at well LW-1S. For the RW-1 pumping test, the aquifer parameter results indicate that T estimates range from about 180 to 520 ft²/day and K estimates range from about 45 to 130 ft/day, assuming an average aquifer thickness of 4 ft. In general, slug tests provide estimates that are less representative of aquifer conditions than pumping tests; however, the Phase II RI slug test K estimates agree reasonably with the pumping test K estimates. The S values of 0.02 to 0.13 estimated for the upper zone from the pumping data are within the range of typical storage values for

unconfined aquifers. Image well evaluations resulted in little to no difference in aquifer parameter values, indicating that the river had very little to no influence on drawdown in RW-1 during pumping.

Horizontal groundwater velocity (V) is a function of hydraulic gradient, hydraulic conductivity, and effective porosity. Groundwater velocities for the upper zone were estimated using a form of Darcy's Law (Lohman 1972) and the effective porosity (n<sub>e</sub>), as shown in the following equation:

$$V = \frac{Ki}{n_e}$$

where: V = average linear groundwater velocity

K = horizontal hydraulic conductivity

i = horizontal hydraulic gradient

 $n_e =$  effective porosity

For calculation of groundwater velocities, the range in K values for the upper zone based on the aquifer test evaluations (slug/bail tests and pumping tests) presented above is estimated to be between about 40 to 160 ft/day. Seasonally, horizontal hydraulic gradients range from 0.006 to 0.067. The effective porosity for the upper zone has not been directly measured, but is estimated to be about 0.3 based on the grain size of the aquifer material (Batu 1998). Based on these estimates, upper zone groundwater velocities were estimated to range between about 0.8 to 36 ft/day.

## 6.4 LOWER ZONE HYDROGEOLOGIC CHARACTERISTICS

This section describes the hydrogeologic characteristics of the lower zone, including groundwater flow and seasonal trends, river stage influence, hydraulic parameter estimates, and groundwater velocities. The hydrogeologic characteristics of the lower zone were evaluated using pre-Phase II RI groundwater level elevation measurements collected from 1993 and 1996, quarterly Phase II RI measurements from March 1997 through November 2004, Phase II continuous water level monitoring measurements, Phase II baseline monitoring during the aquifer tests, and aquifer test results and quarterly Phase III RI measurements from October 2003 through November 2004. Water level data pre-1996, Phase II continuous water level monitoring, and baseline monitoring during aquifer tests were documented in the Phase II RI report. Phase II and Phase III quarterly groundwater level measurements since March 1997 are included in Table B-1 (Appendix B).

Similar to the upper zone, groundwater elevation contour maps for February and November 2004 have been provided on Figures 6-17 and 6-18 to assess seasonal variability. The timing for the quarterly water level measurements was scheduled to estimate mean water level elevations or elevations minimally

influenced by river stage and to reduce the time-dependent variation between wells screened in the same water-bearing zone.

#### 6.4.1 GROUNDWATER FLOW AND SEASONAL TRENDS

Since startup of groundwater interim action recovery well RW-2 in October 2002, pumping has modified groundwater flow in the lower zone in proximity to the pumping well, such that hydraulic capture is achieved to the west near LW-18D and to the south near LW-10D. Groundwater flow outside the RW-2 capture zone is generally to the west/southwest toward the Willamette River.

Hydrographs of water level elevations in the lower zone at selected wells (Figure 6-19) show typical seasonal fluctuations. Similar to the upper zone, the seasonal lows generally occur during the fall months (October-November). The seasonal highs in the lower zone most commonly occur during the spring months (April-May), likely in response to higher river stage, in contrast to the upper zone where groundwater seasonal highs occur in January-February. The hydrographs indicate that the lower zone groundwater elevations fluctuate about 6 to 7 ft seasonally, generally between about 5 and 12 ft MSL.

Continuous water level measurements conducted during the Phase II RI and documented in the Phase II RI report, show that during high river stage, groundwater flow in close proximity to the river is inward toward the site; however, groundwater flows toward and discharges to the river from the lower zone when the river stage is at moderate to lower levels. Continuous water level measurements also illustrate the direct correlation between the stages of the river and the lower zone water levels by showing the propagation of semidiurnal tidal fluctuations in the Willamette River into the lower zone. A more detailed discussion of the influence of the Willamette River stage on water levels in the lower zone is provided in the following section.

Groundwater elevations measured at Phase III wells located along the confining unit boundary in the western portion of the terminal reflect the change from two water-bearing zones (upper and lower) to a single unconfined water-bearing zone. For example, wells LW-9S and LW-10S and piezometers PZ-3 and PZ-4, located near or beyond the extent of the confining unit, are typically dry during summer and fall months. During the wetter winter and spring months, groundwater is observed within the upper zone along this boundary. In the Bell Terminal Tank Farm area, well LW-28S, which is located where the confining unit is thin and likely discontinuous was dry during the summer and fall 2004 quarterly sampling events. Wells LW-41S and LW-33S, located along the southern property boundary within the Bell Terminal Tank Farm area, were dry during the fourth quarter 2004 event, presumably due to the confining unit in this area being higher than at surrounding well locations, the upper zone being thinner in this area, and abnormally dry seasonal conditions. At well LW-27S, the water level appears to represent

an intermediate groundwater elevation between the upper zone and lower zone, thereby indicating the edge of the confining unit and the transition from two groundwater zones to one in this area. The groundwater flow patterns in this area mirror the western extent of the confining unit boundary and groundwater gradients increase sharply where the upper and lower zones converge.

Groundwater elevations measured in the lower water-bearing zone (lower zone) wells were used to estimate groundwater flow in the lower zone and in the area where the confining zone is absent. Groundwater elevation contours for the lower zone are presented on Figures 6-17 and 18. The groundwater flow pattern in the lower zone likely represents the combined influence of two factors: 1) upper zone groundwater flow over the confining unit boundary, and 2) the resulting hydrostatic pressure change when transitioning between confined conditions to unconfined conditions west of the confining unit boundary.

Horizontal hydraulic gradients for the lower zone were calculated for three different areas of the Terminal: 1) the area between well LW-1D and the Willamette River, which represents the northern portion of the Terminal where groundwater flow is generally west toward the river, 2) the area between wells OX-8D and LW-6D, which represents the central portion where groundwater flow is generally to the west-southwest toward the river, and 3) the area in the southern part of the Terminal near LW-30D. Average horizontal gradients range from 0.0006 in the central area of the Terminal to 0.002 in the northern portion of the Terminal (Table 6-1). Groundwater gradients are much greater within the area of influence for recovery well RW-2.

## 6.4.2 RIVER STAGE INFLUENCE ON LOWER ZONE GROUNDWATER

Baseline monitoring data collected prior to aquifer testing at recovery well RW-2 in February 1999 was used to estimate the correlation of groundwater flow characteristics in the lower zone with the Willamette River stage. This data was evaluated by the following methods: 1) comparison of the Willamette River data with groundwater elevation data at the shallow and deep monitoring wells, 2) calculation of tidal efficiencies and lag times between river stage fluctuations and lower zone well fluctuations, and 3) calculation of mean groundwater level elevations in the lower zone. The results of these Phase II activities are summarized below; more detailed discussions of the evaluations are presented in the aquifer test report (Landau Associates 1999b).

As previously discussed, the continuous water level data collected in the Willamette River and the deep monitoring wells during the baseline monitoring period of aquifer testing support the correlation between the groundwater level fluctuations in the lower zone with the stages of the Willamette River. This data was also used to evaluate the tidal efficiency and time lag on the lower zone water levels.

The baseline data indicate that during periods of river recharge to the lower zone (such as those observed in May 1999), tidal efficiencies generally increase with greater distance from the river. These results may be indicative of propagation of river influence farther inward during high river stage, but also reflect a dampening effect of tidal fluctuations in the river on water levels in the nearshore and intermediate lower zone wells. This is converse to the results collected in February 1998 where tidal efficiencies decreased with greater distance from the river during periods of groundwater discharge to the river and response to river stage was much more distinct, reflecting a more typical response to river influence (Landau Associates 1998). Average tidal efficiencies in well LW-12D2, formerly located within the former PCP mixing area and installed within the deep sand unit underlying the lower zone, were generally greater than in the lower zone wells located a comparable distance from the river during the May and June 1999 event. The LW-12D2 tidal efficiency data combined with the overall response to river stage at this location may indicate a more direct influence to river stage in this stratigraphic unit.

Time lags between each maximum and minimum fluctuation in the river and those in the wells were determined for each deep well and averaged. During increasing river stage, it took an average of about 42 minutes for a fluctuation in the Willamette River to be reflected at well LW-9D, located closest to the river, but it took an average of over 1.5 hours for the corresponding river stage influence to be recorded at well LW-12D1. During decreasing river stage, average time lag estimates ranged from about 1 hour at well J2 to about 3 hours at well LW-12D1. Overall average time lags at LW-12D2 appear to be less than the lower zone wells, again indicating a possible greater river influence in the sand unit underlying the lower zone than in the lower zone. A comparison of the May 1999 and February 1998 data indicate that average time lag estimates tend to be approximately the same for both periods. Tables summarizing the time lag calculations were provided in the aquifer test report and Phase II RI report.

To remove the effects of semidiurnal river stage fluctuations on the continuous water levels recorded in the deep wells, mean water level elevations were determined using a filtering method by Serfes (1991). The Serfes method uses a time-weighted, moving average to filter out the semidiurnal fluctuations in the wells from river stage influences to produce water level elevation data that are more representative of mean water level conditions. The adjusted groundwater flow directions indicated that mean groundwater flow in the lower zone was generally to the west toward the Willamette River during the monitoring period. Groundwater flow directly adjacent to the river is inward from the river during high river stages. However, mean flow conditions over most of the Terminal and during lower river stages through most of the year are generally toward the river.

## 6.4.3 Hydraulic Parameter Estimates and Groundwater Velocities

Aquifer parameter estimates for the lower zone were based on data collected during aquifer tests in May-June 1999, including slug/bail tests at five deep wells and a constant rate pumping test at recovery well RW-2. A detailed description of the aquifer tests, evaluation results, and plots is provided in the aquifer test report (Landau Associates 1999b).

Average K values representing the lower zone from the slug/bail test data ranged from about 25 ft/day at well J2 to 80 ft/day at well LW-6D. The average K values calculated at wells LW-11D and LW-9D do not appear to be representative of overall aquifer characteristics, but may possibly be related to the increase in silt content in the water-bearing zone and screened interval at LW-11D or to the effects of recharge from the river during the test period.

Aquifer parameters for the lower zone were also estimated based on data collected during a constant rate discharge test at RW-2. In the lower zone, the data indicate that estimated T values were higher than the upper zone, ranging from about 2,100 to 7,000 ft²/day. K values were comparable to the upper zone and representative values generally ranged from about 65 to 130 ft/day, assuming an average aquifer thickness of 32 ft. S values generally ranged from about 1.2x10<sup>-3</sup> to 8.1x10<sup>-2</sup>, which is within the typical range for storage for confined aquifers. Aquifer test data evaluations indicate that leakage from the upper zone or underlying units is likely occurring to some extent at each observation well and that wells located closest to the river are likely influenced by river recharge. Also, at well LW-9D, the aquifer test data indicate that unconfined aquifer conditions exist at this location. This is consistent with stratigraphic data that indicate that the confining unit between the upper and lower zone is absent at this location creating unconfined conditions and a connection between groundwater in the lower zone and the river.

Groundwater velocities for the lower zone were estimated using the equation provided in Section 6.3.2. For calculation of groundwater velocities, the range in K values for the lower zone based on the aquifer test evaluations (slug/bail tests and pumping tests) presented above is estimated to be between 25 and 130 ft/day. Seasonally, horizontal hydraulic gradients range from 0.0006 to 0.002. The effective porosity for the lower zone has not been directly measured, but is estimated to be about 0.3 based on the grain size of the aquifer material (Batu 1998). Based on these aquifer parameter estimates, lower zone groundwater velocities are estimated to range between about 0.05 to 0.9 ft/day.

# 6.5 VERTICAL GROUNDWATER FLOW

The potential for groundwater flow between the upper and lower zones was evaluated through calculation of vertical hydraulic gradients at shallow and deep well pairs, LW-1S/1D, D/LW-3D, J1/J2,

LW-4S/4D, LW-9S/9D, LW-10S/10D, LW-11S/11D, LW-20S/20D, LW-29S/29D, and LW-32S/32D. Vertical hydraulic gradients were calculated from groundwater elevations measured during the quarterly sampling events from March 1997 through November 2004 (Table 6-2). Vertical gradients were consistently downward at all well pairs during this period. As shown in Table 6-2, vertical gradients at the well pairs between the upper and lower groundwater zones ranged from 0.07 to 0.55. The LW-9S/D well pair, located adjacent to the Willamette River in an area where the confining unit between the upper and lower zones is absent, had the lowest vertical gradient (0.07). The low vertical gradient in this area confirms that the upper and lower zones act as one hydrogeologic unit in this area. The vertical gradients between the upper and lower zones were also much greater than those between the lower zone and the deep sand unit, as represented by abandoned wells LW-12D1/12D2 (average vertical gradient of 0.01).

Figure 6-20 shows the seasonal variability of the vertical gradients at each of the well pair locations. Vertical gradients at the well pairs where long-term data are available are greatest during the seasonal low periods in the fall (October-November). The lowest vertical gradients generally correspond to intermediate seasonal periods during the late spring months (April-May).

# 6.6 AQUIFER RECHARGE AND DISCHARGE

Groundwater in the upper zone is most likely recharged by direct infiltration from precipitation. Lower zone groundwater appears to be recharged primarily from the upper zone and from subsurface flow from the north and east. Groundwater from both water-bearing zones generally discharges to the Willamette River. Groundwater in the lower zone is recharged by the Willamette River during periods of high river flow in response to short-term increases in river stage. The radial flow pattern in the upper zone at the north side of the East Property may be representative of localized recharge to the upper zone in this area.

## 7.0 NATURE AND EXTENT OF CONTAMINATION

This section provides the results of an evaluation of the nature and extent of contamination in the soil and groundwater at the Terminal. The nature of the contamination was determined based on the contaminants detected in samples collected during the various investigations conducted at the Terminal and comparison of soil and groundwater concentrations to preliminary screening levels. The extent of the contamination was determined based on the horizontal and vertical distribution of these contaminants in groundwater and soil. A discussion of the fate and transport of the contaminants based on the evaluation presented in this section is provided in Section 8.0.

The following preliminary soil screening levels were used to evaluate the soil sample results representing the upper 3 ft of soil:

- EPA Region 9 preliminary remediation goals (PRGs) for industrial soil (EPA 2004).
- EPA Region 9 PRGs for the potential migration of contaminants from soil to groundwater using a dilution-attenuation factor of 20 (DAF=20)<sup>1</sup> (EPA 2004).
- Oregon DEQ ecological risk screening level values (SLVs) for soil (DEQ 2001) for the protection of plants, mammals, birds, and invertebrates. Ecological risk is typically evaluated based on the known or suspected presence of hazardous substances in surficial soil (upper 3 ft; DEQ 2001).
- Oregon DEQ generic risk-based concentrations for petroleum constituents and total
  petroleum hydrocarbons based on occupational, construction worker, and excavation worker
  exposure to soil through ingestion, dermal contact, and inhalation; occupational exposure via
  volatilization to outdoor air; and occupational exposure via leaching to groundwater (DEQ
  2003b).
- Site-specific background concentrations for metals determined previously during the COPC and CPEC screening process for Phase I and Phase II soil (Landau Associates 1999a). Metal concentrations in soil were first compared to the site-specific background concentrations; comparison of soil concentrations to the other preliminary screening levels listed above was only conducted where the soil concentrations exceeded background. The COPC/CPEC screening results will be updated to include the Phase III RI data and will be presented in the Phase II/III human health and ecological risk assessments.

The following preliminary soil screening levels used for the evaluation of the soil sample results representing soil greater than 3 ft in depth include the following:

• EPA Region 9 PRGs for the potential migration of contaminants from soil to groundwater using a dilution-attenuation factor of 20 (DAF=20)<sup>1</sup> (EPA 2004).

7-1

BZTO104(e)022786

<sup>&</sup>lt;sup>1</sup> The PRGs for migration to groundwater are based upon back-calculation from a non-zero maximum contaminant level (MCL), an MCL goal (MCLG), or a tap water PRG. Because these levels are based upon an exposure scenario (drinking water) that is excluded by the beneficial use determination for the Terminal, it is appropriate to use the higher DAF as a conservative method for screening.

- Oregon DEQ generic risk-based concentrations for petroleum constituents and total petroleum hydrocarbons excavation worker exposure to soil through ingestion, dermal contact, and inhalation; occupational exposure via volatilization to outdoor air; and occupational exposure via leaching to groundwater (DEQ 2003b).
- Site-specific background concentrations for metals determined previously during the COPC/ CPEC screening process for Phase I and Phase II soil (Landau Associates 1999a). Metal concentrations in soil were first compared to the site-specific background concentrations; comparison of soil concentrations to the other preliminary screening levels listed above was only conducted where the soil concentrations exceeded background.

The preliminary groundwater screening levels used for the evaluation of the groundwater sample results include the following:

- EPA National Recommended Water Quality Criteria (EPA 2002).
- Oregon DEQ ecological risk SLVs (DEQ 2001) for the protection of aquatic species, mammals, and birds.
- Oregon Ambient Water Quality Criteria for freshwater, acute and chronic exposures to aquatic species and human consumption of organism only (Table 33A; DEQ 2004b).
- Oregon DEQ generic risk-based concentrations (RBCs) for petroleum constituents and total
  petroleum hydrocarbons based on construction and excavation worker exposure to
  groundwater, and occupational exposure via volatilization to outdoor air from groundwater
  (DEQ 2003b).
- Site-specific background concentrations for metals determined previously during the COPC/CPEC screening process for upper and lower zone groundwater (Landau Associates 1999a). Metal concentrations in upper and lower zone groundwater were first compared to the site-specific background concentrations; comparison of groundwater concentrations to the other preliminary screening levels listed above was only conducted where groundwater concentrations exceeded background.

These preliminary screening levels are presented in Appendices C and D for soil and groundwater, respectively. The comparison of Phases II and III RI soil and groundwater results to these preliminary screening levels is intended to provide a preliminary and conservative evaluation of the magnitude and areas of contaminant concentrations present at the Terminal exceeding these preliminary screening levels. The screening levels are not presented as cleanup levels. In addition to site-specific background concentrations, only surface water screening levels were used for comparison to groundwater contaminant concentrations because the primary pathway of concern at the Terminal is groundwater to surface water. Groundwater within the locality of the facility is not currently used as drinking water nor is it reasonably likely to be used as a drinking water source in the future based on the results of the beneficial water use determination (Section 4.3). Final screening levels to be used for determining COPCs/CPECs for the Terminal based on Phase III and Phase III soil and groundwater results will be

identified during the risk assessment process. Also, as indicated earlier, hot spots of contamination will be identified following determination of acceptable risk levels during the risk assessment process.

#### **7.1 SOIL**

The nature and extent of contamination present in the soil at the Terminal was evaluated based on chemical results for soil samples collected during the Phase II and the Phase III RIs. Soil concentrations discussed in the following sections are representative of soil remaining at the Terminal following completion of interim removal actions (Section 2.0).

#### 7.1.1 SELECTED CONTAMINANTS OF INTEREST

Tables summarizing the constituents detected in soil at the Terminal are provided in Appendix C. Consistent with the historical uses of the Terminal for bulk storage of petroleum products and for blending of specialty wood treating products, constituents detected in the soil include these chemical groups: petroleum hydrocarbons and constituents that are commonly associated with petroleum products (i.e., PAHs and VOCs); metals; and chlorinated phenols. To focus the discussion in this report on the distribution of constituents that will likely be risk drivers, concentrations for only a few constituents from each of these groups of chemicals (i.e., TPH, cPAHs, VOCs, chlorinated phenols, and metals) were selected for presentation on the Terminal maps. The maps are presented on Figures 7-1 through 7-26. The constituents selected for presentation of soil concentrations and referred to throughout this discussion as selected contaminants of interest (COIs) include: diesel-range and gasoline-range petroleum hydrocarbons, benzo(a)pyrene, benzene, ethylbenzene, lead, zinc, and PCP. These constituents were identified as the selected COIs based on the frequency that these constituents were detected in the soil and groundwater and the frequency that the detected concentrations exceed the minimum preliminary screening levels.

For example, diesel-range and gasoline-range petroleum hydrocarbons were the most frequently detected petroleum hydrocarbons in soil. For this reason, and because of the history of the Terminal as a bulk fuel storage facility, diesel-range and gasoline-range petroleum hydrocarbons were included in the selected COIs. Of the PAHs detected in soil, benzo(a)pyrene concentrations most frequently exceeded the preliminary screening level. Although benzene and ethylbenzene were not the most frequently detected VOCs in soil, they were included in the selected COIs because the concentrations of benzene and ethylbenzene in soil most frequently exceed the preliminary screening levels. Very few of the concentrations for the other detected VOCs in soil exceed preliminary screening levels.

Except for mercury and nickel, each metal was detected in 98 percent or more of the soil samples analyzed. The frequency of metal detections is likely related to the ubiquitous occurrence of most metals analyzed in soil in this area. Therefore, instead of using the frequency of detection for identifying the metals of interest, the frequency that the metals concentrations exceed the preliminary screening levels, including site-specific background, was used. A comparison of the concentrations for individual metals to preliminary screening levels indicates that the metals that most frequently exceed the minimum preliminary screening level in soil are lead and zinc.

PCP was also included in the selected COIs based on the historical uses of PCP in the specialty wood treating products blended and stored at the Terminal.

Preliminary screening levels for all detected constituents in soil, when available, are presented in Tables C-1 through C-6 of Appendix C. As noted above, COPCs/CPECs will be identified through the screening process defined by DEQ guidance (DEQ 1999, 2000b) during the upcoming risk assessment.

#### 7.1.2 CONTAMINANT DISTRIBUTION

This section evaluates the distribution of the COIs in soil at the Terminal at concentrations above the minimum preliminary screening levels, except for diesel-range petroleum hydrocarbons, for which no applicable risk-based preliminary screening levels are available. The evaluation includes both the horizontal and vertical distribution of the COIs. To facilitate evaluation of the horizontal distribution, the Terminal was divided into six subareas based on historical Terminal operations: the Main Terminal Tank Farm area, the Bell Terminal Tank Farm area, the loading rack/entrance area of the Main Terminal Tank Farm area, the eastern portion of the Phase III study area, the asphalt-paved road area located north of the Bell Terminal Tank Farm area, and the Phase II study area (Figure 1-2). To facilitate evaluation of the vertical distribution, soil was divided into four depth intervals: surface soil (0 to 0.5 ft BGS); shallow unsaturated soil (1 to 1.5 BGS and 5 to 5.5 ft BGS); and the capillary fringe (and deeper). If a COI was not detected in any samples for a depth interval, the constituent is not illustrated for that depth interval. The remainder of this section discusses the distribution of the selected COIs at concentrations above the preliminary screening levels at the four depth intervals for each subarea.

# 7.1.2.1 Main Terminal Tank Farm Area

Locations where soil samples were collected within the Main Terminal Tank Farm area are shown on Figure 2-7. Concentrations of detected constituents within this area are provided in Table C-1.

# Surface Soil

A total of 15 surface soil samples (i.e., the upper 0.5 ft of soil) were collected from within the Main Terminal Tank Farm area and submitted for analysis. The distribution of the eight selected COIs in the Main Terminal Tank farm area, based on the results for these 15 soil samples, is shown on Figures 7-1 through 7-6. Of the eight selected COIs, only benzo(a)pyrene, lead, and zinc were detected at concentrations above the minimum preliminary screening levels. Diesel-range petroleum hydrocarbons were detected in the surface soil, but at concentrations below the minimum preliminary screening level of 23,000 mg/kg (DEQ risk-based concentration for direct soil exposure to construction worker; DEQ 2003b, as shown on Figure 7-1. Diesel-range petroleum hydrocarbons in the surface soil ranged from less than the laboratory reporting limit (i.e., nondetect) to 438 mg/kg. No gasoline-range petroleum hydrocarbon concentrations were greater than the laboratory reporting limit, as shown on Figure 7-2. As shown on Figure 7-3, the distribution of benzo(a)pyrene at concentrations exceeding the preliminary screening levels is limited to an area in the southern portion of the Main Terminal Tank Farm area, whereas, the distribution of lead and zinc at concentrations exceeding the respective preliminary screening levels is more widespread (shown on Figures 7-4 and 7-5, respectively). Most of the detected benzo(a)pyrene, lead, and zinc at concentrations above the respective minimum preliminary screening levels in the Main Terminal Tank Farm area surface soil are associated with composite samples; therefore, the distribution of these constituents is conservatively illustrated by plotting the composite concentrations at each subsample location.

#### Shallow Unsaturated Soil

A total of 24 soil samples were collected from the shallow unsaturated soil within the Main Terminal Tank Farm area and submitted for analysis. For this discussion, shallow unsaturated soil includes the 1 to 1.5 ft BGS and 5 to 5.5 ft BGS sample depth intervals. The distribution of the eight selected COIs, with respect to the minimum preliminary screening levels (if applicable), at these depths are shown on Figures 7-7 through 7-11 and 7-12 through 7-18. Similar to the shallow soil in the Main Terminal Tank Farm area, diesel-range petroleum hydrocarbons were detected at concentrations greater than 100 mg/kg in the shallow unsaturated soil. Concentrations of diesel-range petroleum hydrocarbons greater than 1,000 mg/kg (i.e., up to 7,170 mg/kg) were detected in the shallow unsaturated soil at and around the conveyance/manifold pipes where the gasoline-range petroleum hydrocarbons were also detected (Figures 7-7 and 7-12). The COIs detected at concentrations above the minimum preliminary screening levels within the shallow unsaturated soil include lead (at the 1 to 1.5 ft depth interval), zinc (at the 1 to 1.5 ft depth interval), gasoline-range petroleum hydrocarbons (at the 5 to 5.5 ft depth interval),

and benzene (at the 5 to 5.5 ft depth interval). The distribution of lead and zinc concentrations exceeding the preliminary screening levels do not correlate except at a limited number of locations. Gasoline-range petroleum hydrocarbons and benzene concentrations above the preliminary screening levels appear to be limited to an area near the conveyance/manifold pipes that trend northeast-southwest through the Main Terminal Tank Farm area (Figures 7-13 and 7-15, respectively). The presence of benzene and gasoline-range petroleum hydrocarbons in this area at this depth may indicate a potential source for the gasoline-range petroleum hydrocarbon and benzene contamination found in the capillary fringe soil (discussed later in this section). However, these constituents were not detected or were detected at low concentrations below the preliminary screening levels within the surface soil and at the 1 to 1.5 ft depth interval.

## Capillary Fringe Soil

A total of 49 soil samples were collected from the capillary fringe or deeper in the Main Terminal Tank Farm area and submitted for analysis. The results for these samples reveal that the highest concentrations of the selected COIs in the Main Terminal Tank Farm area are present in soil within the capillary fringe depth interval. Diesel-range petroleum hydrocarbon concentrations range from less than the laboratory reporting limit (i.e., nondetect) to 36,100 mg/kg. (No relevant preliminary screening level is available for diesel-range petroleum hydrocarbons present in soil below a depth of 3 ft BGS.) The distribution of diesel-range petroleum hydrocarbons in the capillary fringe soil is shown on Figure 7-19. Gasoline-range petroleum hydrocarbon concentrations range from nondetect to 8,920 mg/kg. approximate horizontal extent of gasoline-range petroleum hydrocarbons at concentrations exceeding the preliminary screening level (110 mg/kg; DEQ risk-based concentration for occupational exposure via leaching to groundwater; DEQ 2003b) is shown on Figure 7-20. Some of the highest concentrations of each range of petroleum hydrocarbons are present in samples collected from the hand-augered borings located adjacent to the conveyance/manifold pipes (e.g., HB-01, HB-02, and HB-03); however, the maximum diesel-range petroleum hydrocarbon concentration (36,100 mg/kg or 3 percent diesel-range petroleum hydrocarbons in soil) was found near the northern property boundary at LW-19S. Components of gasoline (e.g., benzene and ethylbenzene) are also present within the capillary fringe soil in the Main Terminal Tank Farm area at concentrations exceeding the preliminary screening levels (0.03 mg/kg and 13 mg/kg, respectively), but the area of impact is much smaller, as shown on Figures 7-22 and 7-23. Benzo(a)pyrene, a component of diesel, is not present in the capillary fringe soil at concentrations exceeding the preliminary screening level of 0.21 mg/kg (Figure 7-21). The presence of lead in the capillary fringe soil in the Main Terminal Tank Farm area at concentrations exceeding the preliminary

screening levels is limited to a few sampling locations. Zinc was the only COI not detected at concentrations exceeding the preliminary screening level in the Main Terminal Tank Farm area capillary fringe soil.

#### 7.1.2.2 Bell Terminal Tank Farm Area

Locations where soil samples were collected within the Bell Terminal Tank Farm area are shown on Figure 2-7. Concentrations of detected constituents in this area are provided in Table C-2.

## Surface Soil

A total of 23 surface soil samples have been collected at the Bell Terminal Tank Farm area and submitted for analysis. The distribution of the eight selected COIs in the surface soil (i.e., the upper 0.5 ft of soil) based on the results for these samples is shown on Figures 7-1 through 7-6. Of the eight selected COIs, only benzo(a)pyrene, lead, and zinc were detected at concentrations above the minimum preliminary screening levels. Gasoline-range petroleum hydrocarbons were not detected in surface soil (Figure 7-2). As shown on Figures 7-3, 7-4, and 7-5, the presence of these three constituents at concentrations exceeding the preliminary screening levels in the surface soil appears to extend throughout the Bell Terminal Tank Farm area; however, many of the sampling locations shown to contain elevated concentrations are associated with composite samples and, therefore, the contoured areas represent a conservative representation of the contaminant distribution. Diesel-range petroleum hydrocarbons were also detected in the surface soil, but at relatively low concentrations ranging from nondetect to 859 mg/kg. Many of these detected concentrations are also associated with composite samples. Samples collected from the upper 2 ft of soil within the eastern portion of the former PEO property contained diesel-range petroleum hydrocarbon concentrations ranging from 97.6 to 4,280 mg/kg, which are greater than those observed within the Bell Terminal Tank Farm area (Figure 7-7; Bridgewater 2001).

#### Shallow Unsaturated Soil

A total of 33 soil samples were collected from the shallow unsaturated soil in the Bell Terminal Tank Farm area and submitted for analysis. Results for these soil samples indicate that the three COIs present in the surface soil at concentrations exceeding the preliminary screening levels [benzo(a)pyrene, lead, and zinc] are also present in the shallow unsaturated soil at concentrations exceeding the preliminary screening levels, but the impacted area is much smaller and generally limited to an area near the western property boundary as shown on Figures 7-9, 7-10, and 7-11. Also, the depth of impact does not appear to extend to the 5 to 5.5 ft BGS depth interval, as shown on Figures 7-14, 7-16, and 7-17. Diesel-range

petroleum hydrocarbons ranged from nondetect to 66 mg/kg in the shallow unsaturated soil. The other four COIs (gasoline-range petroleum hydrocarbons, benzene, ethylbenzene, and PCP) were not detected in the shallow unsaturated soil at concentrations exceeding the respective preliminary screening levels.

# Capillary Fringe Soil

A total of 45 soil samples have been collected within the capillary fringe in the Bell Terminal Tank Farm area and submitted for analysis. Results for these samples indicate that of the eight selected COIs, only gasoline-range petroleum hydrocarbons were detected at concentrations exceeding the minimum preliminary screening level (Figure 7-20). Diesel-range petroleum hydrocarbons were also detected in the capillary fringe soil at concentrations ranging from nondetect to 15,100 mg/kg (Figure 7-19), but no relevant preliminary screening level is available for diesel-range petroleum hydrocarbons present in soil below a depth of 3 ft BGS. The elevated concentrations of gasoline-range and diesel-range petroleum hydrocarbons appear to be focused in three areas: adjacent to the east-west trending pipeline,, along the western property boundary outside the tank farm walls in an area previously used by owners and/or operators of the adjacent property, and in the central portion of the Bell Terminal Tank Farm area (Figures 7-19 and 7-20). The presence of diesel-range hydrocarbons at the north side of the Bell Terminal at concentrations exceeding 1,000 mg/kg is based on the results of a composite sample within grid 22. This concentration is likely due to soil collected at subsample location G22-03, located near the east-west trending pipeline. To further evaluate the nature and extent of gasoline-range and diesel-range petroleum hydrocarbons within the capillary fringe at the Bell Terminal Tank Farm area, concentrations of these compounds along the eastern portion of the adjacent property boundary were evaluated. Figures 7-19 and 7-20 show the locations on the eastern portion of the former PEO property boundary where soil samples were collected at depths within or below the capillary fringe and analyzed for diesel-range and gasoline-range petroleum hydrocarbons. As indicated on Figures 7-19 and 7-20, gasoline-range and diesel-range petroleum hydrocarbons are present in the soil at depths within or below the capillary fringe in the eastern portion of the former PEO property at concentrations similar to or greater than the concentrations detected within the Bell Terminal Tank Farm area (Bridgewater 2001). The highest diesel-range petroleum hydrocarbon concentrations were observed at locations along the eastwest trending pipeline and along the western property boundary (15,100 mg/kg at LW-43S, 12,700 mg/kg at SCH56, and 10,200 mg/kg at SCH59) of the Bell Terminal Tank Farm area (Figure 7-19). These data indicate that there are likely sources of petroleum hydrocarbons originating from areas of former fuel storage on former PEO property in addition to the source originating within the central portion of the Bell Terminal. This is further supported by analytical results for soil samples collected in the upper 2 ft of soil

at the former PEO property, which indicate the presence of diesel-range petroleum hydrocarbons in the shallow soil within the eastern portion of the former PEO property at concentrations exceeding 1,000 mg/kg (Figure 7-7; Bridgewater 2001).

# 7.1.2.3 Loading Rack/Entrance Area of the Main Terminal

Locations where soil samples were collected within the loading rack/entrance area of the Main Terminal Tank Farm area are shown on Figure 2-7. Concentrations of detected constituents in this area are provided in Table C-3.

## Surface Soil

Because this area is covered with gravel fill, surface soil samples were not collected, except at location LW-7S. Of the COIs, only PCP was detected in the surface soil at this location at a concentration of 0.011 mg/kg, which is below the preliminary screening level of 0.03 mg/kg [EPA Region 9 PRG for potential migration of contaminants from soil to groundwater using a DAF of 20 (EPA 2004); Figure 7-6]. The presence of PCP in this area is likely related to activities associated with the former PCP mixing area (see discussion on the Phase II area below.)

#### Shallow Unsaturated Soil

Eight soil samples were collected from the shallow unsaturated soil within the loading rack/entrance area of the Main Terminal Tank Farm area. These samples were collected at a depth interval of 1 to 1.5 ft BGS. Results for the soil indicate that PAHs, TPH, and VOCs are not present in the soil in this area at this depth interval. Metals were detected in the soil at this depth, but only zinc was detected at concentrations exceeding the preliminary screening level. The locations where the concentrations of zinc exceed the preliminary screening level are shown on Figure 7-11.

#### Capillary Fringe

Eleven soil samples were collected from the capillary fringe in the loading rack/entrance area and submitted for analysis. The results for these samples indicate that the frequency of detected constituents in soil increases in this area at the capillary fringe depth interval. A few PAHs; several VOCs; diesel-range, gasoline-range, and kerosene-range petroleum hydrocarbons; and metals were detected in the soil at this depth; however, of the eight selected COIs, only gasoline-range petroleum hydrocarbons were detected at concentrations exceeding the minimum preliminary screening levels (Figure 7-20). These exceedances are associated with a composite sample collected from biased sampling area B3, which is the former location of the loading racks from the Main Terminal Tank Farm area to trucks. However, LANDAU ASSOCIATES

because the exceedances are associated with a composite sample, the contoured areas represent a conservative representation of the contaminant distribution.

#### 7.1.2.4 Eastern Portion of the Phase III Study Area

Locations where soil samples were collected within the eastern portion of the Phase III study area are shown on Figure 2-7. Concentrations of detected constituents in this area are provided in Table C-4.

#### Surface Soil

Thirty-eight soil samples have been collected and submitted for analysis within the upper 0 to 0.5 ft depth interval in the eastern portion of the Phase III study area. The results for these samples indicate that of the eight selected COIs, only benzo(a)pyrene, lead, and zinc are present in surface soil at concentrations exceeding the preliminary screening levels (Figures 7-3, 7-4, and 7-5). Gasoline-range petroleum hydrocarbons, benzene, ethylbenzene, and PCP were not detected. Diesel-range petroleum hydrocarbons were also detected at this depth interval at concentrations ranging from nondetect to 549 mg/kg, but below the minimum preliminary screening level of 23,000 mg/kg (Figure 7-1). The detected concentrations of diesel-range petroleum hydrocarbons and cPAHS in the surface soil appear to be associated with oiling of historical roads in this area.

#### Shallow Unsaturated Soil

Seventeen soil samples were collected within the shallow unsaturated soil in the eastern portion of the Phase III study area. All but one of these samples were collected at a depth interval of 1 to 1.5 ft BGS. Because the capillary fringe in this area is shallow and close in depth to the 5.0 to 5.5 ft depth interval, only one sample (composite sample BA-11) was collected at the 5.0 to 5.5 ft depth interval within this area. Results for the soil samples indicate that benzo(a)pyrene, lead, and zinc are present at concentrations exceeding the preliminary screening levels at the 1 to 1.5 ft depth interval. The approximate horizontal extent of these exceedances is shown on Figures 7-9, 7-10, and 7-11, respectively. The frequency that lead and zinc are present at concentrations exceeding preliminary screening levels decreased significantly at the 1 to 1.5 ft depth interval compared to exceedances observed in the surface soil. Diesel-range and gasoline-range petroleum hydrocarbons were not detected at the 1 to 1.5 ft depth interval, except at one location, BA-11, where diesel-range petroleum hydrocarbons were detected at a concentration of 574 mg/kg (Figure 7-7); these constituents were not analyzed in the one sample from the 5 to 5.5 ft depth interval. At the 5.0 to 5.5 ft depth interval, the results for sample B-11 indicate that

benzo(a)pyrene (Figure 7-14) and other PAHs are not present at this depth at concentrations exceeding preliminary screening levels. Metals were not analyzed at this depth interval.

# Capillary Fringe

Thirteen soil samples were collected within the capillary fringe soil in the eastern portion of the Phase III study area. At the capillary fringe depth interval, only a few PAHs [Figure 7-21 for benzo(a)pyrene] and VOCs (Figures 7-22 and 7-23 for benzene and ethylbenzene, respectively) were detected. Metals were frequently detected, but did not exceed the preliminary screening levels (Figures 7-24 and 7-25 for lead and zinc). Diesel-range and gasoline-range petroleum hydrocarbons were not detected (Figures 7-19 and 7-20).

## 7.1.2.5 Asphalt-Paved Road Area

Locations where soil samples were collected within the asphalt-paved road area are shown on Figure 2-7. One sample was collected at the 0 to 0.5 ft BGS depth interval; one sample was collected from the 1 to 1.5 ft BGS depth interval; and two samples were collected from the capillary fringe. Concentrations of detected constituents in this area are provided in Table C-5. Metals were detected at each of the soil depth intervals sampled (i.e., 0 to 0.5 ft BGS, 1 to 1.5 ft BGS, and the capillary fringe); however, concentrations of metals above the preliminary screening levels were only detected in the surface soil (0 to 0.5 ft BGS; Figures 7-4 and 7-5 for lead and zinc, respectively). PAHs and petroleum hydrocarbons were only detected in the surface soil sample. Benzo(a)pyrene was the only PAH (Figure 7-3) that was detected at concentrations above the preliminary screening levels within the surface soil depth interval only. Motor oil-range petroleum hydrocarbons were detected at a concentration of 301 mg/kg, but diesel-range and gasoline-range petroleum hydrocarbons were not detected at any depth interval (Figures 7-19 and 7-20, respectively). Samples collected in this area were collected below the asphalt surface and underlying roadbase material, with one exception, location G-20. The detected concentrations in the surface soil at this location likely result from the presence of these constituents in the roadbase material of the asphalt road.

#### 7.1.2.6 Phase II Study Area

Locations where soil samples were collected that represent soil remaining in the Phase II study area are shown on Figure 2-7. Concentrations of PCP remaining in the soil following completion of the soil removal actions in the former soil stockpile area and former PCP mixing and warehouse areas are shown on Figure 2-4. Concentrations of detected constituents in soil remaining in this area are provided

in Table C-6. PCP was the constituent used to determine the extent of contamination and cleanup for the soil removal action in this area. Because of the limitations in excavating soil below the water table, the base of the removal action excavation did not extend beyond about 13 ft BGS. Consequently, PCP concentrations ranging from greater than 2 mg/kg to 180 mg/kg potentially remain within and adjacent to the former PCP mixing area at depths as shown on Figure 2-4. The effects of the ISCO injections on soil concentrations will be assessed at the completion of the full scale implementation.

## Surface Soil

Because most of the surface soil was removed from this area during the removal actions, only samples from four locations (LB16, LS1, LS2, and LW-1D) represent the existing surface soil. PAHs, PCP, petroleum hydrocarbons, and metals were all detected in the surface soil in this area. The only PAH concentrations exceeding preliminary screening levels is benzo(a)pyrene (Figure 7-3). Lead (Figure 7-4), zinc (Figure 7-5), and copper are present at concentrations above the preliminary screening levels in small, localized areas. Concentrations of diesel-range (Figure 7-1) and motor-oil range petroleum hydrocarbons range from nondetect to 160 mg/kg and 130 mg/kg to 420 mg/kg, respectively. PCP was only detected at locations LW-1D and LB16 at concentrations exceeding the preliminary screening level of 0.03 mg/kg (Figure 7-6).

#### Shallow Unsaturated Soil

Seven samples represent the soil remaining at depths greater than 0.5 ft BGS, but above the capillary fringe in this area. At these depths (1.0 to 1.5 ft and 5.0 to 5.5 ft depth intervals), only PCP (Figure 7-18) exceeds preliminary screening levels. (Note that a figure showing PCP concentrations for the 1 to 1.5 ft BGS depth interval is not included because there were no detected concentrations.) No VOCs, except BTEX, were analyzed at these depth intervals. BTEX was not detected at concentrations above the laboratory reporting limits in the soil (Figure 7-15 for benzene). Copper and zinc were the only metals analyzed and both were detected, but at concentrations below the preliminary screening levels (Figures 7-10 and 7-16 for lead; Figures 7-11 and 7-17 for zinc). Diesel-range petroleum hydrocarbons were detected in three samples from the 5.0 to 5.5 ft depth interval at concentrations ranging from 6.4 to 66 mg/kg. Motor oil-range petroleum hydrocarbons were detected in one sample at a concentration of 98 mg/kg. Gasoline-range petroleum hydrocarbons were not detected within either depth interval (Figures 7-8 and 7-13).

# Capillary Fringe

Seventy-five samples represent the soil remaining at depths within or below the capillary fringe in this area. At this depth interval, PCP is the predominant COI that was detected at concentrations above the preliminary screening level, as shown on 7-26. Soil containing PCP concentrations at these levels remained following the soil removal action in this area because of the physical constraints of excavating soil below the groundwater table. Residual PCP soil concentrations at this depth are being addressed through use of the ISCO technique in this area. Concentrations of diesel-range petroleum hydrocarbons in the soil ranged from nondetect to 4,700 mg/kg (Figure 7-19). Gasoline-range petroleum hydrocarbons at concentrations exceeding preliminary screening levels were observed at two locations, as shown on Figure 7-20. Dioxins and furans were also detected at locations within the former PCP mixing area at concentrations ranging from about .011 ng/kg to 5,110 ng/kg (total TEQ).

# 7.2 GROUNDWATER

The nature and extent of contamination present in the groundwater at the Terminal was evaluated based on chemical results for groundwater samples collected from Phase II and Phase III monitoring wells, injection wells, and recovery wells between October 2003 and November 2004 and from discrete groundwater samples collected from direct-push borings during the preliminary evaluation and the interim subsurface investigation during 2001-2002 at the Terminal. The data collected from monitoring wells in January 2003 and from direct-push borings on the adjacent former PEO property in 1996 and 1998 were also reviewed to assess the nature and extent of groundwater contamination.

#### 7.2.1 SELECTED CONTAMINANTS OF INTEREST

Tables summarizing the results for detected constituents in groundwater at the Terminal are provided in Appendix D. Consistent with the constituents detected in the soil at the Terminal, petroleum hydrocarbons and individual constituents that are commonly associated with petroleum products (e.g., PAHs and VOCs), or wood treatment formulation operations (e.g. PCP), and metals were detected in groundwater. Similar to soil, only a few constituents from each of these groups of chemicals (i.e., petroleum hydrocarbons, PAHs, VOCs, and metals), which are expected to be drivers during the risk assessment, were plotted on maps of the Terminal (Figures 7-27 through 7-46). The concentrations were contoured using the minimum preliminary screening level for each selected constituent. The constituents selected for presentation and referred to throughout this discussion as selected COIs for groundwater include: diesel-range and gasoline-range petroleum hydrocarbons, benzene, ethylbenzene, and PCP. In addition, chromium and copper were included as COIs for the lower zone, with a specific focus on the

nearshore monitoring wells, including wells located along the river bank and those on the shoreline of the Willamette River, to assess the groundwater transport pathway to the river, as shown on Figures 7-47 and 7-48.

The COIs were selected based on the frequency that the constituents were detected in the groundwater and the frequency that the detected concentrations exceeded preliminary screening levels. Gasoline-range and diesel-range petroleum hydrocarbons were the most frequently detected petroleum hydrocarbons in groundwater. For this reason, and because of the history of the Terminal as a bulk fuel storage facility, diesel-range and gasoline-range petroleum hydrocarbons were included in the selected COIs. There are currently no published risk-based values to use as preliminary screening levels for assessment of diesel-range hydrocarbons in groundwater or surface water; therefore, the diesel-range petroleum hydrocarbon data are not contoured. Although benzene and ethylbenzene were not the most frequently detected VOCs in groundwater, they were included in the selected COIs because the concentrations of benzene and ethylbenzene in groundwater have most frequently exceeded the preliminary screening levels since monitoring began for the Phase III wells. PAHs were detected at a small number of wells (one upper zone well and four lower zone wells) at concentrations exceeding the preliminary screening levels. Of the PAHs detected in groundwater, no one constituent consistently exceeded the preliminary screening levels. Also, although present in soil, benzo(a)pyrene was not detected in groundwater at concentrations exceeding the preliminary screening level, except at two lower zone Phase III wells where only five quarters of data are available. Therefore, PAHs were not included in the selected COIs. PCP was included in the selected COIs based on the elevated concentrations detected in the groundwater in and downgradient of the former PCP mixing area over time. Metals, with the exception of chromium, which were often detected in soil, were generally not detected in upper zone groundwater exceeding site-specific background concentrations or the risk-based preliminary screening levels. Metals concentrations exceeding the preliminary screening levels are typically more prevalent in the lower zone groundwater. Lower zone metals concentrations tend to exceed preliminary screening levels more frequently for chromium, copper, nickel, and zinc. Chromium and copper have been included in the selected COIs for the lower zone, as described above. A discussion of an assessment of the metals concentrations is provided in Section 7.2.3.

Preliminary screening levels for detected constituents in groundwater are presented in Tables D-1 and D-2 of Appendix D of this report for the upper and lower zones, respectively.

#### 7.2.2 **CONTAMINANT DISTRIBUTION**

As discussed in Section 6.2, two zones of groundwater are present below the Terminal: the upper zone and the lower zone. The distribution of the selected COIs in the two zones of groundwater is presented on Figures 7-27 to 7-36 and Figures 7-37 to 7-46, respectively, and discussed in the remainder of this section.

# 7.2.2.1 Upper Zone Groundwater

The analytical results for groundwater samples collected from the 45 upper zone wells during quarterly events from spring 1997 through November 2004 were evaluated for this report. For purposes of discussion and because the most recent Phase III RI well installation occurred during the fall 2004, presentation of groundwater data for this report is focused on data collected for the fourth quarter (October) 2003 event (including direct-push data from 1996 through 2002) and the fourth quarter (November) 2004 event. Trends in contaminant concentrations for quarterly data collected since 1997 or since well installation were evaluated and are discussed in Section 7.2.3. A discussion of the distribution of contaminants in the upper zone groundwater by area based on the October 2003 and November 2004 analytical data is provided below. Groundwater data collected from direct-push sampling points in 2001 during the planning stages for the Phase III RI and on the former PEO property between 1996 and 1998 for TPH constituents and for January 2003 for BTEX are also included with the October 2003 data. These are the most recent data available from locations on the PEO property for these constituents.

#### Main Terminal Tank Farm Area

Four upper zone wells located in the Main Terminal Tank Farm area were installed in the fall of 2003. One additional upper zone well was installed in November 2004. Therefore, the distribution of contaminants and evaluation of contaminant trends in upper zone groundwater within the Main Terminal Tank Farm area are based on a maximum of five quarters of data, collected between October 2003 and November 2004. In addition to the quarterly data, eight groundwater samples were collected from temporary well points in August through October 2001 and July 2002 for determining the locations of permanent monitoring wells. These results are presented with the October 2003 event data, which is the first quarter when data for the Phase III wells was collected. Upper zone monitoring wells are only located in the eastern half of the Main Terminal Tank Farm area. In the western half of the Main Terminal Tank Farm area, the confining unit becomes discontinuous and the upper and lower groundwater zones converge. As described in Section 6.2.3, groundwater levels in the western half of the Main Terminal Tank Farm area are consistent with those typically observed at wells screened within the 12/20/05 \Edmdata\wproc\231\009\132\PhIII RI 122005 Revised\PhIII RI Rpt Rev Dec 2005.doc

lower zone. This is also generally true for groundwater levels on the former PEO property; however, groundwater elevations for the former PEO property are not plotted because the most recent data available is from January 2003 and are not comparable to the 2004 groundwater elevations for the Terminal presented for this report. Evaluation of the contaminant distribution in groundwater throughout the western portion of the Main Terminal Tank Farm is provided in Section 7.2.2.1.

Results for upper zone groundwater in the Main Terminal Tank Farm area for the fourth quarter 2003 and fourth quarter 2004 groundwater monitoring events indicate the presence of diesel-range and gasoline-range petroleum hydrocarbons (Figures 7-27 through 7-30). Concentrations of diesel-range petroleum hydrocarbons in groundwater samples collected during the October 2003 groundwater monitoring event and in groundwater samples collected from temporary direct-push locations during earlier groundwater investigations ranged from nondetect to 19.6 mg/L (Figure 7-27). Concentrations of diesel-range petroleum hydrocarbons in groundwater samples collected during the November 2004 sampling event ranged from nondetect to 6.45 mg/L (Figure 7-28). During the October 2003 groundwater monitoring event, concentrations of gasoline-range petroleum hydrocarbons in the upper zone groundwater exceeding the preliminary screening level (12 mg/L; DEQ RBC, construction and excavation worker; DEQ 2003b) occurred at a single location (LW-21S; Figure 7-29); however, gasolinerange petroleum hydrocarbons were not detected above the preliminary screening level in November 2004 (Figure 7-30). Maximum concentrations of diesel-range and gasoline-range petroleum hydrocarbons are typically observed in groundwater at locations near tanks or conveyance pipelines located on the eastern portion of the Main Terminal Tank Farm area. During the October 2003 event, product was observed in wells Q and P (Table 7-3) at thicknesses ranging from 0.02 to 0.24 ft and near this area at direct-push location GW8-1 in 2001. During November 2004, product was observed at wells Q, LW-21S, and LW-27S (Table 7-3) with thicknesses ranging from 0.02 to 0.25 ft.

Constituents associated with the diesel-range and gasoline-range petroleum hydrocarbons (i.e., PAHs and VOCs) are also present in the upper zone groundwater in the Main Terminal Tank Farm area, but are not as widespread as the petroleum hydrocarbon constituents, as shown by the distribution of benzene and ethylbenzene concentrations on Figures 7-31 through 7-34. During the October 2003 sampling event, benzene was detected at a concentration exceeding the preliminary screening level of 51 µg/L (Oregon Ambient Water Quality Criteria, fish consumption only; DEQ 2004b) at one location (LW-21S at 1,600 µg/L; Figure 7-31). For the November 2004 sampling event, product was observed in LW-21S; therefore, this well was not sampled. Benzene was not detected in groundwater during the November 2004 groundwater monitoring event at wells at concentrations greater than the preliminary screening level (Figure 7-32). Occurrences of ethylbenzene in groundwater at concentrations exceeding the preliminary screening level (7.3 µg/L; Oregon DEQ ecological risk screening level value, surface LANDAU ASSOCIATES

water; DEQ 2001) were more widespread than observed for benzene during the October 2003 event with the maximum concentration (940 µg/L) occurring at the same well as the maximum benzene concentration (i.e., LW-21S; Figure 7-33). During the November 2004 event, the distribution of ethylbenzene near LW-21S is not as well defined because a groundwater sample was not collected from well LW-21S due to the presence of product in the well and because groundwater samples were not collected from temporary well points during this event (Figure 7-34). For the October 2003 and November 2004 events, PAH concentrations ranged from nondetect to 13.8 µg/L. Only two PAHs (fluorene and phenanthrene) were detected at concentrations exceeding preliminary screening levels [3.9] μg/L for fluorene, 620 μg/L for phenanthrene; DEQ SLVs, surface water (DEQ 2001)], at four of the 2001 temporary well point locations. For the metals analyzed, chromium was detected at concentrations exceeding the preliminary screening level [0.011 mg/L; DEQ SLV, surface water (DEQ 2001)] at three locations (LW-13S, LW-19S, and RW-1) within the Main Terminal Tank Farm area during November 2004 and at three additional wells (LW-8S, LW-20S, and LW-27S) during other 2004 events (Table D-1). However, chromium concentrations did not exceed the preliminary screening levels at any location during the October 2003 event. Other metals were observed at concentrations exceeding the screening levels, including copper, zinc, and nickel, but at only a few locations. During the October 2003 event, PCP was detected in upper zone groundwater in the Main Terminal Tank Farm area downgradient of the former PCP mixing area at concentrations ranging from 0.58 to 1.1 µg/L and at a direct-push location (GW14-1) at a concentration of 4.35 µg/L (Figure 7-35), but only groundwater at the direct-push location exceeded the preliminary screening level of 3.0 µg/L (Oregon Ambient Water Quality Criteria, fish consumption only; DEQ 2004b). During the November 2004 event, PCP concentrations in this area were nondetect except at RW-1 where the concentration exceeded the preliminary screening level at a concentration of 123 µg/L (Figure 7-36). RW-1 is located downgradient of the former PCP mixing area and will be discussed in the context of the Phase II study area discussion below.

# Bell Terminal Tank Farm Area

Twenty-three upper zone groundwater samples were collected from temporary well points in 2001 and 2002 in the Bell Terminal Tank Farm area. Seven permanent upper zone monitoring wells were installed in fall 2003 and an additional four upper zone wells were installed in fall 2004. Groundwater results for samples collected in October 2003 and from the temporary well points in 2001 and 2002 were combined with the most recent groundwater data from the former PEO property. For TPH constituents, the most recent groundwater data available from the former PEO property were collected in 1996 and 1998, and for BTEX constituents, the most recent data available was collected in January 2003. Data presented for November 2004 were only collected from the Terminal well locations.

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Groundwater data collected within the Bell Terminal Tank Farm area and on the eastern portion of the former PEO property suggest the presence of three commingled petroleum hydrocarbon plumes within this area: 1) one originating in the central portion of the Bell Terminal Tank Farm area near the east-west trending pipeline, 2) one originating along the western property boundary outside the walls of the tank farm, and 3) one originating on the eastern portion of the former PEO property where significant petroleum releases are known to have occurred, such as in the area where the former diesel ASTs were located. Even though it is likely that the plume originating from the central portion of the Bell Terminal commingles with the plume originating near the western property boundary, and that both of these plumes commingle with other contamination originating on the former PEO property in the area where the former diesel ASTs were located, it is unlikely that the elevated concentrations observed near the western property boundary or on the former PEO property originate from the Bell Terminal tank farm operations. This conclusion is based on the significant increase in both soil and groundwater concentrations for petroleum constituents across the western property boundary and on the former PEO property. Also, product has consistently been observed with thicknesses up to about 6 ft in wells on the eastern portion of the former PEO property (well MW-4) between 2001 and 2003, but no product has ever been observed within the Bell Terminal Tank Farm area. Well MW-4 is located on the former PEO property near the locations of the former diesel ASTs and about 40 ft from the western property boundary of the Bell Terminal Tank Farm area, and about 100 ft from the operations portion of the Bell Terminal Tank Farm area. This contaminant distribution supports the presence of different sources than in the tank farm area.

Based on geologic cross-sections, soil boring data, and water level elevation data collected on the former PEO property (Bridgewater 2001; Bridgewater 2002; URS 2002; Gradient 2003), groundwater data from the eastern portion of the PEO property appear to represent concentrations in the upper zone, including wells MW-4 and MW-14, and some of the temporary Geoprobe locations. However, well boring information is not available for the monitoring wells (including MW-4) and other historical locations in this area and some of the Geoprobe borings do not extend deep enough to encounter the confining unit, if present. The estimated extent of the confining unit in this area based on available information is shown on Figure 6-1. To the west of the extent of the confining unit boundary, similar to observations within the Main Terminal Tank Farm area, groundwater data likely represents groundwater concentrations where the confining unit is absent; these groundwater concentrations are discussed under the lower zone groundwater section.

Based on data collected to date from the Bell Terminal Tank Farm area, the highest concentration of diesel-range petroleum hydrocarbons (796 mg/L) in the upper zone was observed in groundwater sample at temporary well point SCH-63B during October 2001. This temporary well point is located along the western property boundary of the Bell Terminal Tank Farm area, as shown on Figure 7-27.

This result is comparable to the concentration of 530 mg/L detected in the split of the same sample collected by Schnitzer representatives. Based on the direct-push data collected on the former PEO property in 1996 and 1998, diesel-range petroleum hydrocarbons concentrations ranging from 6.6 to 6.8 mg/L occur about 40 to 50 ft to the west of the western property boundary of the Bell Terminal Tank Farm area. (Figure 7-27). Gasoline-range petroleum hydrocarbon concentrations in the upper zone follow a similar distribution pattern as the diesel-range petroleum hydrocarbon concentrations, with concentrations only exceeding the preliminary screening level (12 mg/L; DEQ RBC, construction and excavation worker; DEQ 2003b) on the former PEO property where a maximum concentration of 38.7 mg/L was observed at direct-push location B-60 (Figure 7-29). Even though diesel-range petroleum hydrocarbons were detected at concentrations ranging from 0.59 to 22.2 mg/L and a gasoline-range petroleum hydrocarbon concentration exceeded the preliminary screening level within the central portion of the Bell Terminal Tank Farm area (maximum concentration of 12.2 mg/L from a direct-push location in July 2002), concentrations for both these constituents appear to decrease in the downgradient direction and then increase again at the western property boundary and on the former PEO property, further supporting the presence of different sources in these areas than in the Bell Terminal Tank Farm area (Figures 7-27 and 7-29). This interpretation is also supported by the distribution of benzene and ethylbenzene concentrations (Figures 7-31 and 7-33). Data are not available from the former PEO property in 2004. Constituents associated with diesel-range and gasoline-range petroleum hydrocarbons (i.e., PAHs and VOCs) are also present in the upper zone groundwater in the Bell Terminal Tank Farm area; however, the area of impacted groundwater appears to be smaller (Figures 7-31 through 7-34). Of the petroleum constituents, only ethylbenzene concentrations exceeding the preliminary screening level (7.3 µg/L; DEQ SLV, surface water; DEQ 2001) are present at three discrete locations in the Bell Terminal Tank Farm area, based mainly on the direct-push data. One location is along the pipeline within the central portion of the tank farm, another location is along the pipeline to the west, and another location is along the western property boundary outside the walls of the tank farm (Figure 7-33). However, during November 2004, the benzene and ethylbenzene concentrations appear to have decreased and are mostly nondetect except for low concentrations of benzene near the western property boundary (Figures 7-32 and 7-24). PAHs were detected even less frequently in the upper zone groundwater than benzene and ethylbenzene (Table D-1). Additional data from locations on the former PEO property in this area are needed to better define the source of these concentrations.

#### Loading Rack/Entrance Area of the Main Terminal

Results for groundwater collected from monitoring well LW-7S and temporary well point GW4-1 were used to evaluate the distribution of contaminants in the upper zone groundwater within the loading

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rack/entrance area. Based on these results, the extent of the gasoline-range petroleum hydrocarbon and ethylbenzene detections in the Main Terminal Tank Farm area appear to extend into the western portion of the loading rack/entrance area based on the October 2003 and November 2004 data, but only ethlybenzene concentrations at this location exceed the preliminary screening level (Figures 7-29, 7-30, 7-33, and 7-34)

# Eastern Portion of the Phase III Study Area

Results for three groundwater samples collected from temporary well points (GW6-1, GW15-1, and GW17-1) were used to evaluate the distribution of contaminants in the upper zone groundwater within the eastern portion of the Phase III Study Area. Petroleum hydrocarbon constituents were not analyzed at these three locations; however, no VOCs or PAHs (except low concentrations of pyrene) were detected in the upper zone groundwater. No permanent monitoring wells are located in this area.

# Asphalt-Paved Road Area

Results for one groundwater sample collected from temporary well point, GW20-1, were used to evaluate the presence of contaminants in the upper zone groundwater within the asphalt-paved road area. No contaminants were detected in this sample. No permanent monitoring wells are located in this area.

#### Phase II Study Area

Results from permanent monitoring wells and two recovery wells were used to evaluate the distribution of contaminants in upper zone groundwater within the Phase II Study area. The only significant plume of contamination in the upper zone groundwater in the Phase II study area is PCP, as shown on Figures 7-35 and 7-36. In October 2003, PCP concentrations in an area within and downgradient of the former PCP mixing area exceeded the preliminary screening level [3.0 µg/L; Oregon AWQC for aquatic species (DEQ 2004b) and National AWQC for organisms only (EPA 2002)] with concentrations ranging from 130 µg/L to 2,100 µg/L (Figure 7-35). In November 2004, the overall size of the PCP plume had diminished and concentrations within the plume had decreased significantly with the previous maximum concentration at well OX-6S decreasing to 624 µg/L (Figure 7-36). These decreases in PCP concentrations appear to result from the July 2004 ISCO injection event within the PCP plume area (see Section 2.2.2.7). Plumes of petroleum hydrocarbon constituents originating within the Main Terminal Tank Farm area do not appear to be associated with those in the Phase II areas. Concentrations of diesel-range and gasoline-range petroleum hydrocarbons and VOCs downgradient of the former PCP mixing area are likely related to the presence of PCP carrier oils (e.g. mineral spirits) in groundwater and as NAPL (see Section 7.3.2). In this area, ethylbenzene is the only COI that exceeds the preliminary

screening level (7.3  $\mu$ g/L; DEQ SLV, surface water; DEQ 2001) at concentrations up to 64  $\mu$ g/L at RW-1 during the October 2003 event (Figure 7-33) and up to 50  $\mu$ g/L at OX-2S during the November 2004 event (Figure 7-34).

#### 7.2.2.2 Lower Zone Groundwater

Groundwater samples collected from 36 lower zone permanent monitoring wells during quarterly events from spring 1997 through November 2004 were evaluated for this report. Groundwater samples were also collected from permanent monitoring wells and temporary well points located on the former PEO property that are likely representative of the lower zone groundwater. As described earlier in Section 7.2.2.1, hydrogeologic data collected at the Bell Terminal and on the adjacent former PEO property indicate that the upper zone is discontinuous in the western portion of the Main Terminal Tank Farm area and on the former PEO property to the west of the western property boundary of the Bell Terminal Tank Farm area, as shown on Figure 6-1. Therefore, groundwater data from monitoring wells on the former PEO property, except for wells MW-4 and MW-14, presumably represent groundwater elevations and groundwater concentrations comparable to the lower zone beyond the extent of the confining unit at the Terminal. For purposes of discussion and because the most recent Phase III RI well installation occurred in fall 2004, presentation of lower zone groundwater data from the Terminal for this report is focused on data collected for the fourth quarter 2003 event (including groundwater data collected from temporary well points from 1996 through 2002) and the fourth quarter 2004 event. Trends in contaminant concentrations for quarterly data collected since 1997 or since well installation are evaluated and discussed in Section 7.2.3. A discussion of the distribution of contaminants in the lower zone groundwater by area for October 2003 and November 2004 is provided below. Groundwater data collected from temporary well points in 2001 during the planning stages for the Phase III RI and on the former PEO property between 1996 and 1998 (for TPH constituents) and in January 2003 (for BTEX) are also included with the October 2003 data. TPH data has not been collected on the former PEO property since the 1996 and 1998 events and the BTEX data from January 2003 is the most recent data available.

#### Main Terminal Tank Farm Area

Eight of the lower monitoring wells located in the Main Terminal Tank Farm area were installed in fall 2003. An additional seven wells were installed in October-November 2004, including the four wells located along the shoreline of the Willamette River, and the replacement well for LW-4D (LW-4DR). Therefore, the distribution of contaminants and contaminant trends in upper zone groundwater within the Main Terminal Tank Farm area are based on a maximum of five quarters of data,

collected between October 2003 and November 2004. In addition to the quarterly data, four groundwater samples were collected from temporary well points from August through October 2001 and in July 2002 for determining the locations of permanent monitoring wells. These data are presented with the October 2003 results because this was the first quarter when the Phase III wells were sampled.

The results indicate that contaminants are present in the lower zone groundwater along the western portion of the Main Terminal Tank Farm area where the confining unit is discontinuous or not present and where the upper and lower groundwater zones converge. In this area, diesel-range petroleum hydrocarbon concentrations ranged from less than the laboratory reporting limit (i.e. nondetect) to 3.1 mg/L in October 2003 (Figure 7-37) with a maximum concentration of 6.57 observed at temporary well point GW12-1 in 2001, and ranged from nondetect to 3.91 mg/L in November 2004 (Figure 7-38). Gasoline-range petroleum hydrocarbon concentrations ranged from nondetect to 0.92 mg/L in October 2003 (Figure 7-39) with a maximum of 2.92 mg/L observed at temporary well point GW16-1 in 2001, and ranged from nondetect to 3.83 mg/L in November 2004 (Figure 7-40), but no concentrations exceeded the preliminary screening level (12 mg/L; DEQ RBC, construction and excavation worker; DEQ 2003b). Gasoline-related compounds (e.g., benzene and ethylbenzene) also have not been detected in the lower zone groundwater at the Main Terminal Tank Farm area at concentrations exceeding the preliminary screening levels. In October 2003, benzene concentrations ranged from nondetect to 40 μg/L [below the preliminary screening level of 51 μg/L; Oregon AWQC for fish consumption only (DEQ 2004b) and National AWQC for organisms only (EPA 2002); Figure 7-41]. Concentrations of benzene were lower in November 2004 with a maximum concentration of only 12.1 μg/L (Figure 7-42). In October 2003, ethylbenzene was only detected at monitoring well R and recovery well RW-2 at concentrations of 3.8 and 2.6 µg/L, respectively (below the minimum preliminary screening level of 7.3 μg/L; DEQ SLV, surface water; DEQ 2001; Figure 7-43). In November 2004, ethylbenzene was detected only at well RW-2 at a concentration of 2.06 μg/L (Figure 7-44).

Within the eastern portion of the Main Terminal Tank Farm area, where the confining unit is present, there have been fewer detections of contaminants in the lower zone groundwater. Diesel-range petroleum hydrocarbons have been detected most frequently; however, the concentrations are low (ranging from 0.4 mg/L to 2.2 mg/L in October 2003 and 0.263 to 3.13 mg/L in November 2004; Figures 7-37 and 7-38, respectively). Gasoline-range petroleum hydrocarbons were only detected in October 2003 at wells LW-26D and RW-2 (Figure 7-39) and in November 2004 at wells LW-26D, LW 27D, and RW-2 (Figure 7-40) at concentrations ranging between 0.188 to 1.23; however none of the concentrations exceeded preliminary screening levels.

No product has been observed in the lower zone.

PCP is present in the lower zone groundwater, but only in the very southern portion of the Main Terminal Tank Farm area, and is the result of downgradient migration from the Phase II study area. Also, the highest concentrations of benzene and ethylbenzene in the eastern portion of the Main Terminal Tank Farm area for the lower zone groundwater (and typically the only occurrences) are at recovery well RW-2 (Figures 7-41 through 7-44). Because RW-2 has been recovering PCP-impacted groundwater in this area since the fall of 2000, the presence of benzene and ethylbenzene at this location could be due to the draw of these constituents from the tank farm area toward the pumping well. Additional discussion of the PCP concentrations downgradient of the Phase II study area is included in the Phase II Area section below.

Detected concentrations of metals, including chromium, copper, lead, nickel, and zinc are present at concentrations exceeding the preliminary screening levels within the Main Terminal Tank Farm area at concentrations up to 0.93 mg/L for zinc at well LW-35D in October 2003. These metals concentrations could be the result of dissolution of metals under reducing conditions enhanced by the presence of petroleum constituents in the lower zone, as discussed in Section 7.2.3.

As shown in Table 7-1 and on Figure 7-47, groundwater results for the Willamette River shoreline wells collected during November 2004, February 2005, and June 2005 (results from 2005 events are provided in their entirety in separate deliverables; Landau Associates 2005c, d) indicate that, with the exception of chromium in wells LW-37D, LW-38D, and LW-39D and copper in well LW-37D in November 2004, no concentrations exceeded the preliminary screening levels. These data demonstrate that, even though there is a physical groundwater transport pathway from the upland areas of the terminal to the river, facility-related groundwater contaminants are not currently reaching the river at concentrations above applicable screening level values. Therefore, there is not a complete exposure pathway to potential receptors in the Willamette River via groundwater for these contaminants at concentrations above applicable screening levels. Groundwater concentrations in the shoreline wells will be confirmed during a full year of groundwater monitoring.

# Bell Terminal Tank Farm Area

Three permanent monitoring wells were installed in the lower zone within the Bell Terminal Tank Farm area in fall 2003. In addition, groundwater data were collected in 1996 and 1998 (for TPH) and January 2003 (for BTEX) from locations on the adjacent former PEO property. The data from the Bell Terminal Tank Farm area and the former PEO property were used to evaluate the distribution of contaminants in the lower zone groundwater within the Bell Terminal Tank Farm area.

The results indicate that, except for diesel-range petroleum hydrocarbons and metals, contaminants are not detected in the lower zone groundwater in the Bell Terminal Tank Farm area 12/20/05 \\Edm\data\\proc\231\009\132\Phill R1 122005 Revised\Phill R1 Rpt Rev Dec 2005.doc LANDAU ASSOCIATES

(Figures 7-37 to 7-46). Low concentrations of diesel-range petroleum hydrocarbons were detected ranging from 0.319 to 0.6 mg/L within the Bell Terminal Tank Farm area (Figures 7-37 and 7-38). As stated earlier, groundwater concentrations on the former PEO property to the west of the approximate confining unit boundary where the confining unit appears to be discontinuous are presumably representative of lower zone concentrations. In the area where the confining unit is presumably not present on the former PEO property, elevated concentrations of diesel-range petroleum hydrocarbons, and gasoline-range petroleum hydrocarbons and ethylbenzene exceeding preliminary screening levels are observed, as shown on Figures 7-37, 7-39, and 7-43. Diesel-range hydrocarbons are observed at concentrations ranging from 1.33 to 35 mg/L, with the maximum concentration (as total TPH) occurring at direct-push location G (Figure 7-37). Gasoline-range petroleum hydrocarbon concentrations range from 3.1 to 44.5 mg/L, with the maximum concentration (as total TPH), occurring at direct-push location B-9 (Figure 7-39). Benzene concentrations were nondetect for the wells sampled on the PEO property in January 2003 (Figure 7-41), but ethylbenzene concentrations were detected at concentrations up to 1,500 μg/L at well MW-5, which is located about 275 ft downgradient of the Bell Terminal Tank Farm boundary (Figure 7-43). Because the confining unit boundary is estimated within the likely source area where the former diesel ASTs were located on the eastern portion of the PEO property, the elevated groundwater concentrations in this area could reflect groundwater contamination resulting from direct releases to soil where the confining unit is not present or downgradient flow of contaminated groundwater from the upper zone across the confining unit boundary. However, in the latter case, concentrations would typically decrease instead of increase in the downgradient direction. No groundwater data are available for the former PEO property in 2004.

Metals concentrations at the three lower zone wells within the Bell Terminal (LW-29D, LW-30D, and LW-32D) exceeded preliminary screening levels for chromium, copper, nickel, and zinc. As indicated earlier, metals concentrations in the lower zone may be the result of reducing conditions enhanced by the presence of petroleum hydrocarbons.

# Loading Rack/Entrance Area of the Main Terminal

No lower zone groundwater monitoring wells exist in the loading rack/entrance area of the Main Terminal.

# Eastern Portion of the Phase III Study Area

No lower zone groundwater monitoring wells exist in the eastern portion of the Phase III study area.

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# Asphalt-Paved Road Area

Only one upper zone monitoring well (LW-10S) and one lower zone monitoring well (LW-10D) exist in the asphalt-paved road area. Since February 2004 and several times prior, LW-10S has been dry during quarterly sampling events. The lack of groundwater is interpreted to be due to the well's location near the confining unit boundary. For both LW-10S and LW-10D, PCP and metals were the only analytes detected in the groundwater from these wells. In LW-10D, PCP was detected at a concentration of 0.94 µg/L in October 2003, which is less than the preliminary screening level, but PCP was not detected at this location in November 2004. The intermittent detections of PCP at this location are interpreted to represent seasonal variability in the downgradient extent of the PCP plume in the lower zone, as discussed previously. The metals detected include arsenic, chromium, copper, lead, and zinc. All but zinc and arsenic were detected at concentrations exceeding the preliminary screening levels with a maximum concentration of 0.0233 for chromium in November 2004.

#### Phase II Area

The analytical results for groundwater samples collected at six permanent monitoring wells located in the Phase II area were used to evaluate the distribution of contaminants in the lower zone groundwater within the Phase II area. PCP was detected at two wells (LW-3D and OX-8D) at concentrations less than 1 µg/L in October 2003, but not at concentrations exceeding preliminary screening levels (Figure 7-45). PCP was not detected at these wells in November 2004 (Figure 7-46). PCP is also in lower zone groundwater in the very southern portion of the Main Terminal Tank Farm area, and is the result of downgradient migration from the Phase II study area. The concentrations of PCP ranged from nondetect to 8.1 µg/L in October 2003 (Figure 7-45) and nondetect to 2.12 µg/L in November 2004 (Figure 7-46). The maximum PCP concentration during both events occurred at recovery well RW-2 during the October 2003 event and is the only concentration of PCP in the lower zone groundwater that exceeds the preliminary screening levels. The distribution of the PCP plume in the lower zone reflects the influence of the pumping of recovery well RW-2. Diesel-range petroleum hydrocarbons (Figures 7-37 and 7-38) have also been detected in this area at LW-11D at concentrations up to 0.66 during the October 2003 event. Other petroleum-related constituents (e.g., gasoline-range petroleum hydrocarbons, benzene, and ethylbenzene) have also been detected but none at concentrations exceeding preliminary screening levels. Metals, including lead, chromium and copper were also detected at concentrations exceeding preliminary screening levels with a maximum observed concentration of 0.0305 mg/L (chromium at well OX-8D).

#### 7.2.3 METALS EVALUATION

The presence of metals exceeding preliminary screening levels in lower zone groundwater was assessed to determine whether the concentrations could be attributed to greater overall background concentrations for metals in the lower zone, to dissolution of metals under reducing conditions resulting from the biodegradation of petroleum constituents accompanied by the consumption of soluble and solid phase electron acceptors (Chapelle et. al. 2002) or natural conditions, or to possible turbidity in the samples. Metals concentrations in lower zone groundwater within the Main Terminal and Bell Terminal tank farm areas (and in upper zone groundwater for chromium only in the Bell Terminal tank farm area) exceed preliminary screening levels; however, the concentrations of petroleum constituents are significantly greater within the Main Terminal tank farm area than in the Bell Terminal.

Site-specific background concentrations for metals in upper and lower zone groundwater were determined previously during the Phase I/II COPC/CPEC screening process based on data from upper zone wells located on the East Property (Landau Associates 1999a). Except for arsenic and lead, the preliminary screening levels were greater than the background concentrations. Also, metals concentrations in lower zone groundwater in upgradient portions of the Phase II area (wells LW-1D and LW-3D) are less than the preliminary screening levels, indicating that the metals concentrations observed within the tank farm areas are likely not related to background concentrations.

Turbidity has typically been measured during the quarterly sampling events in each well sampled. The groundwater sampled from the wells is mostly free of suspended material; however, if suspended material is observed, a request is made to the laboratory to not disturb the sample and extract from the supernatant portion. Comparisons of turbidity measurements with metals concentrations did not indicate a direct correlation between these parameters. Also, both dissolved and total metals analyses were conducted on the shoreline wells during the first quarter 2005 event (to be provided in a separate deliverable). The results indicate that there is not a significant difference between the dissolved and total metals concentrations and, therefore, turbidity is unlikely the cause for the presence of metals concentrations observed in the groundwater samples.

Dissolved oxygen measurements have been collected on a quarterly basis as part of the routine groundwater sampling events. However, the methodology used for collecting measurements (e.g., post-purge) may not provide reliable information for redox conditions. Therefore, based on the available information, it is not possible at this time to determine whether the metals concentrations reflect natural or petroleum constituent – induced reducing conditions or some other condition, based on metals concentrations exceeding preliminary screening levels in the upper zone at the Bell Terminal and within

the lower zone within both tank farm areas. As part of the development of a source control evaluation approach (see Section 9.4), monitored natural attenuation parameters (e.g., dissolved oxygen, oxidation-reduction potential, pH, conductivity, temperature) are being measured on a monthly basis from June to December 2005 using pre-purge, downhole techniques. This information will be used to assess whether there is a correlation between the metals concentrations with redox conditions at the terminal. The results of this assessment will be provided in a source control evaluation document.

#### 7.2.4 CONTAMINANT TRENDS

Contaminant trends were evaluated based primarily on groundwater data collected during the quarterly events between October 2003 and November 2004. The detected concentrations are shown in comparison to the preliminary screening values for these events by area in Appendix D. Trends of contaminant concentrations were evaluated using time versus groundwater elevation and time versus concentration plots for the period covered by the quarterly sampling events: October 2003 through November 2004 for the Phase III wells, March 1996 through November 2004 for most of the Phase II wells, and February 1999 through November 2004 for well LW-8S.

Results of the contaminant trend evaluation for the upper and lower zones are provided by RI area below. The contaminant trend discussion focuses on the selected COIs discussed in Section 7.2.1. Long-term trends in the upper and lower zones will continue to be evaluated as part of the quarterly monitoring events.

# 7.2.4.1 Main Terminal Tank Farm Area

The five quarters of data collected from the Phase III wells between October 2003 and November 2004 were used to evaluate contaminant trends within areas of the terminal used historically for petroleum operations in the Main Terminal Tank Farm area. Plots of petroleum hydrocarbons (dieseland gasoline-range) for selected upper and lower zone wells; plots of diesel-range and gasoline-range petroleum hydrocarbons, benzene; and ethylbenzene including groundwater elevation and Willamette River stage (lower zone wells only) for one upper zone well (LW-8S) and selected lower zone wells (LW 23D and LW-25D) in the Main Terminal Tank Farm area are shown on Figures 7-49 through 7-55. Plots of diesel- and gasoline-range petroleum hydrocarbon concentrations versus groundwater elevation for paired wells in the Main Terminal Tank Farm area (LW-20S/D) are shown on Figure 7-56.

Concentrations of diesel- and gasoline-range petroleum hydrocarbons in the samples from the upper and lower zone wells within the Main Terminal Tank Farm area generally decreased or were similar to those detected during previous quarters, with the exception of gasoline-range petroleum

hydrocarbon concentrations in wells LW-23D and LW-25D. The diesel-range petroleum hydrocarbon concentrations in the upper zone within the Main Terminal Tank Farm area have ranged between about 3 to 12 mg/L, with the highest concentrations detected at well LW-20S during four of the five quarters (Figure 7-49). Gasoline-range petroleum hydrocarbon concentrations in the upper zone within the Main Terminal Tank Farm area are consistently highest at well LW-8S with concentrations over time ranging from greater than 4 to 15 mg/L since this well was first sampled in May 1999 (Figures 7-50 and 7-51). Concentrations of diesel-range petroleum hydrocarbon concentrations in the lower zone within the Main Terminal Tank Farm area tend to be significantly greater than gasoline-range petroleum hydrocarbon concentrations at the same locations over time (Figures 7-52 and 7-53), but less overall than the upper zone concentrations for these constituents (Figures 7-49 and 7-50). Also, petroleum hydrocarbon concentrations in groundwater from the lower zone wells located beyond the extent of the confining unit in the Main Terminal Tank Farm area tend to be greater than from wells farther to the east where the confining unit is present. This is likely the result of upper zone groundwater with higher petroleum hydrocarbon concentrations mixing with lower zone groundwater downgradient of the confining unit boundary. The highest concentration of diesel-range petroleum hydrocarbons detected since quarterly monitoring began at these wells occurred at well LW-25D in February 2004 (about 6.7 mg/L; Figure 7-52). The gasoline-range petroleum hydrocarbon concentrations for the lower zone wells in the Main Terminal Tank Farm area showed similar overall trends to the diesel-range concentrations, except at wells LW-23D and LW-25D where the gasoline-range petroleum hydrocarbon concentrations slightly increased (Figures 7-52 and 7-53).

Upper zone well LW-27S has contained product during three of the last four quarters ranging in thickness from 0.69 ft in February 2004 to 0.02 ft in November 2004. Also, during the last four quarters, measurable product was observed at LW-21S at thicknesses ranging from 1.03 ft in February 2004 to 0.11 in November 2004. A product thickness of 0.24 ft was observed at well Q in October 2003 and again in November 2004 at a thickness of 0.25 ft, but not during the other 2004 groundwater sampling events. Based on information collected for the Phase III RI, the potential sources of product within the Main Terminal Tank Farm area include a diesel spill resulting from the rupture of Tank 29508 in 1975; an unleaded gasoline spill in the vicinity of wells N, P, and O in 1994; and, to a lesser extent, incidental leakage along conveyance pipelines. The two distinct diesel-range petroleum hydrocarbon plumes in the upper and lower zones (Figures 7-27, 7-28, 7-37 and 7-38) and the ethylbenzene plumes in the upper zone (Figure 7-33 and 7-34) within and near the southeast corner of the Main Terminal Tank Farm area represent groundwater concentrations associated with separate historic activities conducted at the Terminal. The plumes to the west including upper zone monitoring location LW-8S and the other Main Terminal Tank Farm area wells are likely associated with spills related to former petroleum operations LANDAU ASSOCIATES 12/20/05 \Edmdata\wproc\231\009\132\PhIII RI 122005 Revised\PhIII RI Rpt Rev Dec 2005.doc

within the Main Terminal Tank Farm area. The plumes to the east, including monitoring locations RW-1 and LW-11S in the upper zone and B2 and RW-2 in the lower zone, are likely associated with carrier oils used with PCP during wood treatment formulation activities within the former PCP mixing area. This interpretation is supported by the results for the product sample collected from well LW-11S in November 2000, which contained 3.2 percent PCP in addition to other petroleum constituents, versus the results for the product samples collected from wells LW-21S and LW-27S in April 2004 (Landau Associates 2004c), which contained only petroleum hydrocarbon constituents (e.g., gasoline-, diesel-, and motor oil-range petroleum hydrocarbon). The plumes in the area around well LW-8S are considered to be associated with the former petroleum operations in the Main Terminal Tank Farm area because upper zone groundwater flow in this area appears to be to the south-southwest (Figures 6-14 and 6-15) and constituents originating in the former PCP mixing area (e.g., PCP) have not been detected at well LW-8S.

Benzene and ethylbenzene concentrations for the upper zone are presented on Figures 7-31 through 7-34, and those for the lower zone are presented on Figures 7-41 through 7-44. In general, the overall distribution of these compounds remained unchanged between October 2003 and November 2004 quarters based on the available data. Upper zone monitoring wells N and Q that contained concentrations of benzene and ethylbenzene exceeding the preliminary screening levels were not sampled in August 2004 because either the well was dry (well N) or contained product (well Q). Benzene concentrations at lower zone monitoring location LW-23D located on the riverbank to the west of the Main Terminal Tank Farm area continued a decreasing trend to 12.1 µg/L in November 2004 following the high detection during the second quarter 2004 sampling event (132 µg/L) (Figure 7-54). Recovery well RW-2 has consistently contained concentrations of benzene above the laboratory reporting limit since February 2002, which, as discussed above, is likely in response to capture caused by pumping of the well. The only other detections of benzene observed in the lower zone were single occurrences at wells LW-22D, LW-26D, LW-45D, LW-4DR, mainly during the November 2004 event, but all were less than the preliminary screening levels. Ethylbenzene has only been detected at RW-2, except for a single occurrence in well R in October 2003, but all concentrations have been less than the preliminary screening level.

Comparison of the diesel- and gasoline-range petroleum hydrocarbon, benzene, and ethylbenzene concentrations with groundwater elevations at selected well locations in the Main Terminal Tank Farm area indicates that groundwater concentrations in the upper zone wells are likely influenced by seasonal fluctuations in groundwater levels, as demonstrated by the long-term data from well LW-8S (Figure 7-51). At well LW-8S, the diesel-range petroleum hydrocarbon concentrations appear to be increasing over time, benzene concentrations are decreasing, and gasoline-range petroleum hydrocarbon and ethylbenzene concentrations have stayed relatively constant since about February 2002. At lower LANDAU ASSOCIATES

zone wells LW-23D and LW-25D (Figures 7-54 and 7-55), groundwater elevations correlate with river stage fluctuations, as expected; however, any trend in groundwater concentrations in response to fluctuations in groundwater level or river stage is not apparent from the available data. Diesel-range petroleum hydrocarbon concentrations at well pair LW-20S/-20D in the Main Terminal Tank Farm area indicate that the concentrations in the upper and lower zones for this constituent are relatively similar, and are all less than 1.0 mg/L (Figure 7-56). Also, there does not seem to be a direct correlation between diesel-range petroleum hydrocarbon concentrations and groundwater levels at these wells based on the available data.

#### 7.2.4.2 Bell Terminal Tank Farm Area

The five quarters of data collected from the Phase III wells between November 2003 and November 2004 were used to evaluate contaminant trends within the Bell Terminal Tank Farm area. The direct-push results collected between 1996 and 2001 at locations on the former PEO property and in the planning stages for the Phase III RI within the Bell Terminal were also evaluated (Figures 7-27 through 7-36). Plots of petroleum hydrocarbons (diesel- and gasoline-range); benzene; and ethylbenzene including groundwater elevation at upper zone well (LW-32S) in the Bell Terminal Tank Farm area are provided on Figures 7-57 through 7-59. Plots of diesel- and gasoline-range petroleum hydrocarbon concentrations versus groundwater elevation for paired wells in the Bell Terminal Tank Farm area (LW-30S/D) are shown on Figure 7-60.

Concentrations of diesel- and gasoline-range petroleum hydrocarbons in the samples from the upper and lower zone Phase III wells were generally less or were similar to those detected during previous quarters, with the exception of gasoline- and diesel-range petroleum hydrocarbons concentrations at well LW-32S. Petroleum hydrocarbon concentrations in samples from these wells increased slightly in November 2004.

In the Bell Terminal Tank Farm area, diesel-range petroleum hydrocarbon concentrations in the upper zone are slightly greater than the gasoline-range concentrations, with the highest concentrations for both constituents occurring in November 2004 at LW-32S (4.44 mg/L for diesel-range petroleum hydrocarbons and 2.87 mg/L for gasoline-range petroleum hydrocarbons; Figures 7-57 and 7-58); however, the gasoline-range concentrations did not exceed preliminary screening levels. (A preliminary screening level was not established for diesel-range petroleum hydrocarbons, as discussed above). Similar or lower concentrations of both of these constituents were detected in the other upper zone wells between the third and fourth quarters of 2004. (Note that well LW-33S was dry during the October 2003 and November 2004 events; LW-28S was dry during the October 2003, August 2004, and November

2004 events, and new well LW-41S was dry in November 2004.) Lower zone groundwater concentrations in the Bell Terminal Tank Farm area for these constituents are much less than the upper zone concentrations, as shown on Figures 7-37 through 7-40. Also, diesel- and gasoline-range petroleum hydrocarbon concentrations are much less in the upper zone groundwater in the Bell Terminal Tank Farm area than in the Main Terminal Tank Farm area (Figures 7-27 through 7-30).

As shown on Figure 7-59, concentrations of benzene and ethylbenzene in upper zone well LW-32S have remained relatively constant over time and there is no apparent correlation between groundwater concentrations and groundwater levels based on the available data. Also at this well, the diesel-range petroleum hydrocarbon concentration increased slightly from 4.24 to 4.44 mg/L, and the gasoline-range petroleum hydrocarbon concentration increased slightly from 1.33 to 2.87 mg/L between the August and November 2004 events. At well pair LW-30S/LW-30D, trends in diesel-range petroleum hydrocarbon concentrations and groundwater levels at lower zone well LW-30D do not correlate; however, there may be some correlation at upper zone well LW-30S (Figure 7-60). Diesel-range petroleum hydrocarbon concentrations have been slightly greater in the upper zone than the lower zone at this well pair, except in the data from the third quarter 2004 sampling event.

# 7.2.4.3 Loading Rack/Entrance Area of the Main Terminal

The analytical results for groundwater samples collected from monitoring well LW-7S were used to evaluate the contaminant trends in the upper zone groundwater within the loading rack/entrance area (Figure 7-61). Based on these results, the concentrations of diesel- and gasoline-range petroleum hydrocarbons, benzene, and ethylbenzene have remained relatively constant over time, except for fluctuations that appear to be related to seasonal fluctuations in groundwater elevations. The diesel-range petroleum hydrocarbon concentration observed in June 2001 (20 mg/L) appears to be anomalous based on the historical data and may be a laboratory recording error. Benzene was not detected at this location.

No lower zone groundwater monitoring wells exist in the loading rack/entrance area of the Main Terminal Tank Farm area.

# 7.2.4.4 Eastern Portion of the Phase III Study Area

No permanent monitoring wells are located in this area.

# 7.2.4.5 Asphalt-Paved Road Area

Only one upper zone well (LW-10S) and one lower zone well (LW-10D) exist in the asphalt-paved road area. Since February 2004 and several times prior, LW-10S has been dry during quarterly

12/20/05 \\Edmdata\\wproc\231\009\132\\PhIII RI 122005 Revised\\PhIII RI\_Rpt\_Rev Dec 2005.doc

sampling events. The lack of groundwater is interpreted to be due to the well's location near the confining unit boundary. For both LW-10S and LW-10D, only PCP and metals have been detected in the groundwater at these locations. The detections of PCP at LW-10D have occurred sporadically, but the concentrations typically do not exceed 1  $\mu$ g/L or the preliminary screening level [3.0  $\mu$ g/L; Oregon AWQC for aquatic species (DEQ 2004b) and National AWQC for organisms only (EPA 2002)]. Metals concentrations have remained relatively consistent over time.

# 7.2.4.6 Phase II Study Area

In addition to analytical data associated with the groundwater interim action and ISCO activities, the quarterly groundwater data from the Phase II wells were used to evaluate long-term groundwater level and contaminant trends for groundwater impacted by former PCP-related operations at the Terminal. PCP concentrations were evaluated by generating time versus groundwater elevation and time versus concentration plots for the period covered by the Phase II RI quarterly sampling events (April 1997 or first available after well installation through the current quarterly event). Plots of PCP concentrations (maximum concentrations of either EPA Methods 8270 or 8040 for events prior to the second quarter 2001 event) versus time for selected upper zone wells (LW-4S, LW-11S, LW-13S, and RW-1) and selected lower zone wells (LW-4D, LW-11D, and RW-2) are provided on Figures 7-62 and 7-63. Plots of groundwater elevations and PCP concentrations for upper zone wells LW-4S and LW-11S are shown on Figures 7-64 and 7-65. Figure 7-66 shows groundwater elevations and PCP concentrations at lower zone well LW-11D plotted with the Willamette River stage through the August 2004 event as mentioned earlier. In addition, PCP concentrations from the fourth quarter (October) 2003 and fourth quarter (November) 2004 events for the upper and lower water-bearing zones are shown on Figures 7-35, 7-36, 7-45, and 7-46 and discussed above.

As shown on Figure 7-62, the PCP concentrations at the selected upper zone wells show variable concentration trends over time. PCP concentrations at RW-1 have continued to decrease since February 2004 and the PCP concentration for November 2004 (123 µg/L) is the lowest observed at this location since November 2002, but is still above the historic low observed during November 2001 (17 µg/L). PCP concentrations at well LW-11S also have continued to decrease since February 2004 (from 2,130 to 184 µg/L), and the PCP concentration in November 2004 is the lowest observed at this location since well installation in 1999. Historically, PCP concentrations detected at well LW-11S appear to reflect a response to seasonal groundwater fluctuations, as shown on Figure 7-65. PCP concentrations at LW-13S have typically been reported at less than 1 µg/L since the fourth quarter 2001 event; PCP was not detected at LW-13S during the November 2004 event, but the laboratory reporting limit increased to 4.92U µg/L. PCP concentrations at well LW-4S appear to reflect

seasonal changes in groundwater elevation and resulting changes in PCP concentrations at upgradient locations (Figure 7-64). The overall reductions in PCP concentrations at monitoring wells within and downgradient of the former PCP mixing area appear to be due to the July 2004 ISCO injection event. Further discussion on the impact of the ISCO injection event on the PCP plume is provided in Section 2.2.2.7.

As shown on Figure 7-63, the PCP concentration in the lower zone at RW-2 has continued to decrease since the May 2004 event (from 46.7 to  $2.12 \,\mu g/L$ ), but is still greater than the historic low PCP concentration recorded at this well in June 2001 (0.68  $\,\mu g/L$ ). Historically, PCPs have been detected sporadically in both LW-11D and G1A; however, during the November 2004 event, PCP was not detected in either well.

Fluctuations in groundwater elevations in the upper zone reflect typical seasonal variability with seasonal lows during the fall months (October-November) and seasonal highs during the winter and early spring months (January-March) based on water levels measured in the Phase II wells since monitoring began in March 1997. The groundwater levels during the past year are similar to those observed during 2000 and 2002. The trends in PCP concentrations correlate with groundwater elevations at some locations. Figure 7-64 shows that there appears to be a correlation between the water level and PCP concentration in the upper zone at well LW-4S since the first quarter of 2002. Figure 7-65 shows that the PCP concentration in the upper zone at well LW-11S generally follows the water level trends in that zone over time. In the lower zone, groundwater levels show trends similar to the seasonal fluctuations in the Willamette River, as shown by the plot of groundwater elevations at LW-11D with river stage on Figure 7-66. However, no correlation is apparent between PCP concentrations and groundwater/river stage elevations at LW-11D.

PCP concentration contours for the upper and lower water-bearing zones (Figures 7-35, 7-36, 7-45 and 7-46) indicate that the overall extent of the PCP plume has narrowed and that the PCP concentrations are significantly lower for the samples collected between October 2003 and November 2004 at all well locations, except for wells LW-4S and OX-2S. This reduction appears to be due to effects from the ISCO injection event, as discussed in Section 2.2.2.7. The sample from monitoring well OX-2S, which is located downgradient of the former PCP mixing area, contained the highest concentration of PCP (1,150 µg/L) for the upper zone wells in November 2004. For the lower zone wells, RW-2 and LW-4DR were the only locations where PCP was detected, as noted earlier. The detected concentrations were all less than the preliminary screening level of 3.0 µg/L [Oregon AWQC for aquatic species (DEQ 2004b) and National AWQC for organisms only (EPA 2002)].

# 7.3 OBSERVATIONS OF NAPL, SHEENS, AND ODORS

The presence of NAPL, sheens, and odors in the soil was monitored during the drilling for soil borings and monitoring wells, and during Phase II CPT explorations. The presence of free product (i.e., LNAPL) on the water table was also checked as part of the quarterly measurement of water levels.

#### 7.3.1 **SOIL**

The presence of NAPL, sheens, and odors within the soil at the Terminal was used to identify potentially impacted soil conditions. NAPL was observed at one location during drilling: LW-27S at a depth of 22.5 ft BGS. Within the Main Terminal Tank Farm area, slight to heavy sheen was observed on soil at depths ranging between 3.5 to 34 ft BGS during drilling and sample collection. This sheen was observed in soil borings LW-19S, LW-20S, LW-21S, LW-26D, N, P, and Q located within the northern portion of the Main Terminal Tank Farm area and in one soil boring, LW-17D, located in the southern portion of the Main Terminal Tank Farm area.

Diesel- and/or petroleum-like odors in the soil were noted during drilling of 26 borings within the Main Terminal Tank Farm area. At two of these locations, P and Q, the odors resembled strong gasoline and at one location, G14-1, the odor resembled a mild ethanol. At soil borings for monitoring wells R and LW-35D, non-petroleum-like odors were noted from 15 to 29.5 ft BGS. These odors were described as faint, sweet, and soap-like at soil boring R and as a mild, rotten sewer-like odor at soil boring LW-35D.

Within the Bell Terminal Tank Farm area, slight to strong sheen was observed at depths ranging between 12.5 to 19.5 ft BGS. The sheen was observed at one location along the east-west trending pipeline (BT-05), at two locations within the central portion of the Bell Terminal (LW-32S/-32D and at soil boring G25-1), and at soil boring LW-30S located along the western property fence line. Slight to strong diesel- or petroleum-like odors were noted in the soil during drilling at 18 soil borings. At two of these locations, LW-28S and LW-31S, the odors were described as mild gasoline-like odors.

Within the Phase II study area, slight to heavy sheen was observed on soil at depths ranging between 0.5 to 19.5 ft BGS. The sheen was observed in soil borings LB-2, LB-12, LB-13, LB-14, LB-17, LB-25, LW-2S, LW-8S, and RW-3. Slight to strong hydrocarbon odors were noted in the soil at 24 soil borings. At the soil borings for injection wells OX-6S, OX-7S, OX-8S, and OX-8D, monitoring wells LW-11S and LW-11D, and recovery well RW-3, the odors were described as strong, mineral-spirit-like odors. A summary of NAPL, sheen, and odor observations in soil is provided in Table 7-2.

# 7.3.2 GROUNDWATER

An evaluation of LNAPL observations documented since August 1993 indicates that LNAPL of varying thickness (0.01 to 1.2 ft) has been observed in upper zone groundwater monitoring wells N, P Q, LW-8S, LW-21S, and LW-27S, located within the Main Terminal Tank Farm area, and at location GW8-1 (Figure 2-7) in the Main Terminal Tank Farm area during the preliminary evaluation. The presence of LNAPL in the Main Terminal Tank Farm area is likely related to spills of petroleum products in this area.

Occasional observations of LNAPL have also been recorded for upper zone groundwater monitoring wells within the Phase II Study area. These wells include OX-1S, OX-2S, OX-3S, and LW-11S and piezometer PZ-2. LNAPL thicknesses at these locations ranged from 0.04 to 0.37 ft. Each of these wells is located within the PCP plume area. Based on the PCP content in a LNAPL sample collected at LW-11S, LNAPL observed within the Phase II area is related to historical spills associated with the PCP mixing area and unrelated to activities within the Main Terminal Tank Farm area. As discussed in Section 7.3.2, the variability in the presence of LNAPL in the Phase II area appears to be related to seasonal fluctuations in the water table. No LNAPL was observed in the upper zone groundwater in the Bell Terminal Tank Farm area, the eastern portion of the Phase III study area, or the asphalt-paved area during past groundwater sampling events.

Except for a slight sheen and a slight to moderate mineral spirits-like odor during the first sampling of well B2 in August 1993, no NAPL or odors have been reported for the lower zone groundwater at the Terminal.

A summary of LNAPL observations in groundwater is provided in Table 7-3.

# 8.0 CONCEPTUAL SITE MODEL

This section provides the conceptual site model for the Terminal based on the hydrogeologic/geologic system and the RI and previous investigation data presented in this report. The conceptual site model includes a description of the defined source areas; a discussion of the general release mechanisms and fate and transport processes, and site-specific fate and transport processes along the exposure pathways for the Terminal. The conceptual site model demonstrates that the existing data are sufficient to define the nature and extent of contamination from the defined source areas and to conduct the human health and ecological risk assessments.

# 8.1 SOURCE AREAS

Sources that have affected soil and groundwater quality at the Terminal were related to separate historical operations, including: 1) a wood treatment formulation operation in the former PCP mixing area and former PCP warehouse area; 2) petroleum handling and storage in the Main Terminal and the Bell Terminal Tank Farm areas, and associated loading rack and petroleum handling areas; 3) storage of waste oils in tanks in the former Crosby & Overton area; 4) oiling of roads on the East Property; and 5) unknown sources along the western property boundary of the Bell Terminal Tank Farm area outside the tank farm wall and on the adjacent former PEO property to the west. Contamination to soil on the East Property has been addressed through a soil remedial action and the soil to groundwater pathway has been effectively eliminated. DEQ has issued a conditional NFA for the East Property portion of the Terminal and further discussion of the conceptual site model is focused on the other areas of the Terminal.

#### 8.1.1 FORMER PCP MIXING AREA AND WAREHOUSE

The primary contaminant of concern resulting from the historical blending of specialty wood treating products is PCP. Two source areas for PCP-related contamination (e.g., PCP by-products and dioxins/ furans) were defined in the Phase II RI. These areas are the former PCP mixing area (including the area below the former PCP warehouse) and the northwestern portion of former Crosby & Overton tank area. As discussed in the Phase II RI report, releases of PCP, carriers, additives, and PCP formulations to soil in the PCP mixing area appear to have occurred during the mixing operations. These releases resulted in the primary source of PCP (and related constituents) contamination to soil in this area with historical PCP soil concentrations exceeding 100,000 mg/kg. Based on historical upper and lower zone groundwater data, the former PCP mixing area was also identified as a significant or primary source of PCP contamination to groundwater with historical concentrations in the upper zone exceeding

60,000 μg/L. PCP concentrations detected in the lower zone have been as high as 18,000 μg/L. Based on the magnitude of PCP detections in the soil and groundwater in and downgradient of the PCP source area and information about the PCP formulations, there is the possibility that free-phase PCP (dense non-aqueous phase liquid (DNAPL)] with a carrier was used, providing a potential residual source of PCP. However, to date, there has been no direct observation of DNAPL at the Terminal.

Contaminated soil was removed from the former PCP mixing area and below the footprint of the former PCP warehouse during a soil removal action in the fall of 2002. Where possible, soil exceeding PCP concentrations of 5 mg/kg was removed from these source areas for offsite incineration and disposal. However, soil containing PCP concentrations above 5 mg/kg still remain in some areas, mainly at or below the water table, as shown on Figure 2-4. An interim remedial action using the ISCO remediation technique is currently being implemented to address PCP-impacted soil and groundwater both in and downgradient of these source areas.

#### 8.1.2 TANK FARM AREAS

As discussed in Section 7.0, contaminants in soil and groundwater at the Terminal associated with petroleum storage and handling operations include mainly petroleum hydrocarbons, PAHs, VOCs, and metals. The presence of these contaminants is consistent with the historical uses of the Terminal for bulk storage of petroleum products.

Three primary source areas for diesel-range and gasoline-range petroleum hydrocarbon contamination (and related constituents) have been identified on the Terminal property based on concentrations of these contaminants detected in soil and groundwater. These areas include the Main Terminal Tank Farm area, the central portion of the Bell Terminal Tank Farm area, and an area along the western boundary of the Bell Terminal Tank Farm area. Another source area appears to occur downgradient of the Bell Terminal Tank Farm area on the former PEO property where significant historical releases have been documented in the area of the former diesel ASTs. Past releases of petroleum products have been documented in the Main Terminal Tank Farm area. Specifically, a release of diesel occurred in 1975 when Tank 29508 (shown on Figure 2-1) split along a vertical weld. An unleaded gasoline spill in 1994 was also reported in the Main Terminal Tank Farm area. Such releases have provided a source for diesel-range and gasoline-range petroleum hydrocarbons (and related constituents such as PAHs and VOCs) at concentrations exceeding 36,000 mg/kg and 8,000 mg/kg, respectively, in soil and at concentrations exceeding 19 mg/L and 24 mg/L, respectively, in groundwater below the Main Terminal Tank Farm area. Leaks along pipelines conveying petroleum products may have also provided a source for the petroleum hydrocarbon contamination in soil and groundwater in this

area. LNAPL has been observed at locations within the Main Terminal Tank Farm area in the area of the 1994 spill and more recently in the central portion of the Main Terminal Tank Farm area, which is likely related to periodic leaks along conveyance pipelines. To a lesser extent, inadvertent spills near the loading rack and entrance to the Terminal may have occurred during truck loading/unloading and may have provided a source of petroleum products to soil and groundwater in this area.

No past releases in the Bell Terminal Tank Farm area or along the western property boundary of the Bell Terminal have been documented. Documented releases have occurred on the former PEO property located downgradient of the former Bell Terminal Tank Farm area. The western portion of a conveyance pipeline that was used to convey petroleum products was demolished by Schnitzer during construction of the former PEO facility in the mid-1970s while still in use and containing product. This pipeline trends east-west from the northernmost dock on the former PEO property through the center of the Bell Terminal. The demolition resulted in release to soil in an area near the dock; any impacts of the release to other areas is unknown. Additionally, petroleum releases on the former PEO property reportedly occurred near the locations of the former diesel ASTs, where product has consistently been observed in nearby well MW-4. As stated above, soil and groundwater concentrations suggest two potential source areas of petroleum constituents within the Bell Terminal Tank Farm area: 1) in the central portion of the Bell Terminal Tank Farm area, and 2) along the western property boundary in an area outside the tank farm wall. Other source areas located downgradient of the Bell Terminal Tank Farm area likely occur on the former PEO property near the locations of the former diesel ASTs. The source for soil and groundwater impacts in the central portion of the Terminal is likely related to minor, incidental releases associated with operations of the Terminal. The maximum petroleum hydrocarbon concentrations observed in soil and groundwater in the Bell Terminal Tank Farm area occur at locations in the upper zone along the western property boundary, but outside the tank farm wall. Elevated concentrations of petroleum hydrocarbons in soil and groundwater in the upper zone and in the area beyond the extent of the confining unit on the eastern portion of the adjacent former PEO property and the presence of product in upper zone well MW-4 located near the location of the former diesel ASTs appear to indicate that there are separate sources unrelated to Time Oil operations in these areas.

# 8.1.3 FORMER CROSBY & OVERTON TANK AREA

In the former Crosby & Overton area, PCBs and PAHs are the primary contaminants of concern due to apparent releases to soil during storage and removal of the oil historically stored in tanks or cleaning of tanks in this area. Contaminated soil was removed from this area as part of the removal actions for the East Property and former PCP mixing area in the fall of 2002. PCB and cPAH

contamination appeared to be limited to surface soil in the former Crosby & Overton source area and has not been detected in groundwater. The removal of soil to depths ranging from 0.5 to 2.5 ft BGS resulted in concentrations of PCBs and cPAHs below the preliminary screening levels at most locations (Figures 2-5 and 2-6.)

# 8.2 GENERAL CONTAMINANT RELEASE AND TRANSPORT MECHANISMS/PATHWAYS

The release mechanisms at the Terminal are predominantly related to historic spills to soil within each of the source areas. Chemicals can be present in the subsurface in the solid or dissolved phase, or as NAPL, either as a LNAPL or, potentially, a DNAPL. Liquids released to the ground surface can percolate through the soil column to groundwater, or chemical or biochemical processes can mobilize chemicals in soil and result in migration to groundwater.

Properties of the soil that influence mobility of the contaminants include: soil heterogeneity, permeability, mineralogy, grain size, and pore geometry. As contaminants migrate through soil pores as NAPL, a portion of the NAPL is retained within the soil pores due to surface tension. The retained NAPL, referred to as residual NAPL, remains essentially immobile in the soil pores, but can constitute a long-term source of dissolved-phase contamination for fluids moving through the soil column. If the release is of sufficient volume to exceed the retention capacity of the soil, the NAPL will continue to migrate downward to low-permeability zones or to the water table. Therefore, the vertical distribution of NAPL in unsaturated soil is controlled by the depth of the water table, as well as the vertical permeability and soil sorptive capacity. At the top of the capillary fringe, NAPL with a density less than that of water (LNAPL) spreads laterally and typically migrates in the direction of groundwater flow. Migration of LNAPL is controlled by the groundwater gradient, the presence of higher permeability material in the groundwater zone (i.e., coarser-grained aquifer material or fill); the volume or rate of the release; the presence of constructed (i.e., fill along pipelines) or natural preferential pathways; and the physical characteristics of the LNAPL. NAPL with a density greater than that of water (DNAPL) can displace soil porewater and continue downward into the saturated zone, migrating along the surface of impermeable geologic boundaries (e.g., silt layers) and through relatively permeable pathways (e.g., sandy interlayers). The transport of DNAPL through the subsurface is based on the physical characteristics of the DNAPL, the volume and rate of the release, and the presence of lower permeability materials within the hydrogeologic system.

Dissolved-phase contamination in groundwater results from contact between infiltrating water and contaminated soil in the unsaturated zone, and/or subsurface water and NAPL. This contact may occur through one or more of the following ways:

12/20/05 \\Edmdata\\wproc\231\009\132\\PhIII RI 122005 Revised\\PhIII RI\_Rpt\_Rev Dec 2005.doc

- Infiltration and movement of water by gravity through the unsaturated zone containing residual NAPL or contaminated soil.
- LNAPL in contact with groundwater at the water table surface
- DNAPL in contact with groundwater within the saturated zone.

The presence of PCP in groundwater at concentrations above its reported solubility in water (14 mg/L at 25°C) and detections of petroleum products at similar locations are likely explained by the presence of carrier compounds in the PCP formulations which will increase the solubility of the PCP.

Certain constituents, such as the lower molecular weight aromatic hydrocarbons (e.g., BTEX) are relatively soluble and volatile and more readily enter the dissolved or air phase. Volatilization occurs more readily in the unsaturated zone than in the saturated zone. Higher molecular weight compounds (e.g., PAHs and PCBs) are less soluble and, therefore, do not enter the dissolved phase as readily. In comparison with PAH compounds, PCP tends to be more mobile. PCP generally exists in the dissolved phase at ambient groundwater pHs (6 to 8). Dioxins/furans partition very strongly to soil and are generally insoluble in water (although soluble in PCP and other organic liquids). Dioxins/furans are generally found in surface soil or near source areas, but NAPL and/or PCP in a separate phase may act as a carrier of these chemicals into the subsurface environment. Dioxins/furans will not tend to migrate in the dissolved phase in groundwater, but rather will resorb to soil. Partitioning of inorganic constituents (e.g., metals) between solid and dissolved phases is mainly controlled by a complex combination of precipitation and sorption reactions, and whether reducing or oxidizing conditions are present. The biodegradation of the petroleum hydrocarbons in the lower zone groundwater appear to have created reducing conditions favoring the mobilization of metals. This may explain the overall higher concentrations of metals in the lower zone under reducing conditions versus the upper zone under oxidizing conditions.

In addition to the chemical properties of the individual contaminants (e.g., solubility), the primary fate processes controlling advection, hydrodynamic dispersion, and adsorption are the movement of dissolved contaminants in groundwater downgradient from the source area. Advection is the transport of constituents by groundwater movement and is, therefore, dependent in part on the hydraulic conductivity of the formation. Hydrodynamic dispersion is the spread of a chemical constituent in directions other than those that would be expected from advection only. The effect of hydrodynamic dispersion is to dilute the contaminant concentrations within the dissolved plume by mechanical mixing and by molecular diffusion at low groundwater velocities. Adsorption is the partitioning of constituents from the dissolved phase onto organic matter within the formation. The most hydrophobic or least soluble compounds (e.g., PAHs and dioxins/furans) adsorb more readily onto soil surfaces than the more soluble compounds,

resulting in a retardation or slowing of their transport velocity relative to groundwater flow. Other processes that may retard the transport of dissolved-phase contamination include biodegradation and complexation or precipitation-dissolution reactions. The degree that these processes affect the migration of dissolved constituents depends on the characteristics of the hydrogeologic system and the type of organic or inorganic compound.

The primary fate processes controlling petroleum hydrocarbons in the subsurface are biodegradation and volatilization. Both aerobic and anaerobic biodegradation of petroleum constituents are known to occur in the subsurface. The degree of degradation that occurs is a function of the availability of the proper nutrients and an electron acceptor (e.g., oxygen). The lower molecular weight aromatic hydrocarbons (e.g., BTEX) are more readily degradable than the higher molecular weight compounds (e.g., PAH). Volatilization acts primarily on the low molecular weight volatile compounds (e.g., BTEX) as compared to the high molecular weight PAH. Aromatic VOCs, such as petroleum hydrocarbons and BTEX, may be strongly attenuated through geochemical and biodegradation processes, whereas attenuation of PCP along migration pathways may be minor due to low partitioning affinity to the aquifer matrix and resistance to degradation under certain aquifer conditions. If contaminants remain in the dissolved phase, or as LNAPL, and are not attenuated, they can be discharged with groundwater to a surface water body.

# 8.3 SITE-SPECIFIC FATE AND TRANSPORT PROCESSES

Based on the data presented in Section 7.0, releases of contaminants at the source areas have occurred during operation of the Terminal. Contamination of soil at each of the source areas appears to be the result of releases of hazardous substances directly onto the soil and subsequent migration. At the former PCP mixing area, these releases occurred during PCP formulation activities. At the former Crosby & Overton area, the releases occurred during lease operations. In the Main Terminal Tank Farm area and loading racks, these releases occurred due to spills and possibly leaking along conveyance pipelines and/or from activities associated with bulk fuel storage. In the Bell Terminal Tank Farm area, these releases may have occurred due to with activities associated with bulk fuel storage or unknown activities along the western property boundary and on the former PEO property. A conceptual site model for the Terminal, which includes a schematic of the source areas, release mechanisms, and transport mechanisms is provided on Figure 8-1.

Based on the hydrogeologic data for the Terminal, groundwater flow direction in the upper and lower zones is toward the Willamette River. Groundwater seeps have not been observed along the riverbank adjacent to the Terminal, so groundwater likely discharges to the river below the water line.

Consequently, there is a potential for dissolved chemicals in groundwater or LNAPL from the Main Terminal Tank Farm area to be transported to the river by groundwater flow. There does not appear to be a current source of groundwater contamination to the river at concentrations exceeding screening levels for the following reasons:

- LNAPL has not been observed in nearshore wells.
- As described earlier, groundwater data collected from Willamette River shoreline wells installed in November 2004, February 2005, and June 2005 indicate that groundwater contaminant concentrations downgradient of the Main Terminal Tank Farm area are not currently reaching the river at concentrations above applicable screening level values. Therefore, even though there is a physical groundwater transport pathway from the upland areas of the terminal to the river, there is not a complete exposure pathway via groundwater to potential receptors in the Willamette River for facility-related contaminants at concentrations above the applicable screening levels.
- The Bell Terminal Tank Farm area boundary is located more than 600 ft from the river shoreline. Groundwater concentrations from the operational area of the Bell Terminal Tank Farm area do not exceed preliminary screening levels, except for low level metals concentrations. Elevated groundwater concentrations along the downgradient western property boundary and on the former PEO property do not appear to be related to Time Oil operations.
- The east-west trending storm drain could historically have provided a preferential pathway for the transport of PCP- impacted groundwater from the Phase II source areas to the river; however, ongoing operation of the groundwater intercept system provides capture/migration of contaminant migration to the river. Migration of PCP in groundwater is also contained through operation of the groundwater interim action system and performance of the full scale ISCO injections within the PCP plume area. PCP has not been consistently detected at the downgradient wells closest to the river or at the river outfall since operation of the groundwater interim action began.

If impacted groundwater has historically discharged to the river from the Terminal, there is the potential for impact to sediment or surface water quality. Historical impacts to the river are being addressed as part of the RI/FS for the Portland Harbor Superfund Project

# 8.3.1 PCP MIXING AREA

The majority of the contaminated soil from the former PCP mixing area and former soil stockpile area has been excavated and disposed offsite. However, residual amounts still remain at depths typically at or greater than 13 ft BGS (the approximate water table elevation) within and directly adjacent to the mixing area. PCP formulations were likely introduced into the environment through spills of PCP-containing NAPL directly onto the ground surface and subsequent migration based on the fate and transport parameters discussed in the previous section. Historical information indicates that most of the

PCP formulations were less dense than water (i.e., specific gravity of less than 1) and, therefore, would migrate through the environment as LNAPL; however, at least one formulation had a density greater than 1 and could move as DNAPL through the subsurface. LNAPL has been observed in wells LW-11S and OX-2S, which are located downgradient from the PCP mixing area. DNAPL has never been observed.

Elevated levels of PCP in the upper zone and lower zone groundwater at the Terminal indicate that PCP has partitioned from the soil and/or NAPL into the groundwater. PCP has been observed in groundwater in both zones in and to the south and southwest (downgradient) of the former PCP mixing area. Historically, low PCP concentrations have also been detected at low concentrations within the deep sand unit near well LW-12D2, located within the former PCP mixing area. The available data suggest that the primary source of the groundwater contamination in the upper zone results from partitioning of PCP from the residual amounts remaining in the soil within and adjacent to the former PCP mixing area and subsequent advective migration from this area, or from partitioning of LNAPL that has migrated downgradient from the PCP mixing area along the water table surface. LNAPL in the downgradient wells has not been observed consistently or over a wide area and is typically associated with very low seasonal groundwater levels. This inconsistent occurrence suggests that the LNAPL exists in a residual phase within the subsurface adjacent to these wells most of the year and then is released/mobilized to the wells when water levels are low.

PCP in the lower zone likely results from downward migration of dissolved PCP via groundwater from the upper to the lower zone where the silt layer separating the upper and lower zones is heterogeneous and/or discontinuous. No DNAPL has been encountered during any of the investigations to date. Therefore, downward migration across the confining unit likely occurs under the natural downward groundwater gradient within the upper zone plume resulting in the elevated concentrations detected in the lower zone. Under this scenario, the PCP concentration distribution within the lower zone would appear to mimic that of the upper zone, while mean groundwater flow in the lower zone would still be toward the river. This distribution is reflected by the observation of the highest concentration of PCP in the lower zone at a downgradient location from the source areas in the upper zone. Further migration of dissolved PCP in the lower zone groundwater would be primarily controlled by advective groundwater flow in a downgradient direction from the impacted area.

The storm drain (Figure 2-1) and backfill associated with its construction appear to affect groundwater flow and contaminant transport in the upper zone. The presence of the storm drain may partly explain the southerly components of upper zone groundwater flow in the Terminal area as groundwater flows toward the zone of higher hydraulic conductivity (i.e., the line backfill). The storm drain does not appear to fully penetrate the confining unit (where present) and, therefore, is not considered to provide a vertical pathway for groundwater flow and contaminant transport to deeper

aquifers. Groundwater samples collected from manholes in the storm drain and at the storm drain outfall in the river (Table 2-4) indicate that the storm drain had been serving as a preferential pathway for upper zone groundwater to the river. The stormwater intercept system was installed to eliminate the potential for upper zone groundwater to migrate through the storm drain to the river. The influence of the stormdrain on groundwater quality will continue to be evaluated as part of the groundwater interim action.

Historical PCP concentrations in groundwater were used to evaluate changes in potential contaminant migration pathways between the historical and current monitoring periods. Figures 8-2 through 8-5 show the approximate distribution of PCP in the upper zone in February 1991, March-April 1997, spring 1999, and February 2001, respectively. The PCP distribution in the upper zone for October 2003 and November 2004 is shown on Figures 7-35 and 7-36. Historically and currently, the PCP in the upper zone is limited to a narrow plume that extends from the former PCP mixing area downgradient about 450 ft to LW-13S. The PCP concentrations in the upper zone are higest within and just downgradient of the former PCP mixing area. PCP appears to have migrated in a downgradient direction toward the south-southwest. Upper zone PCP concentrations within the mixing area have decreased significantly since the first sampling in 1991. This decrease may reflect the removal of contaminant source material during the 1989 soil excavation within the former PCP mixing area, as well as natural attenuation of the PCP (through adsorption, biodegradation, etc.) or downgradient movement past these monitoring points. By May 1999, PCP concentrations as high as 23,000 µg/L were observed at well LW-11S, but there were only slight increases at well LW-4S, the most downgradient well where there have been consistent low level PCP detections. PCP has not migrated in the upper zone farther downgradient to the south than well LW-13S, as indicated by the lack of detected concentrations in upper zone wells near the south property boundary (LW-10S, when saturated). However, low PCP concentrations were detected during the last four sampling events in the lower zone wells at the western extent of the confining unit as discussed below.

The decrease in PCP concentrations in the upper zone since 2002 is likely related to the removal of the majority of the remaining contaminated soil during the soil removal in the former PCP mixing area and from implementation of the ISCO technique. (Note that the PCP distribution based on the earlier data is an approximation, and less accurate than the distribution based on the 2000-2004 data because of the difference in the number of data points as well as potential QA/QC issues.) Figures 8-6 through 8-8 show the approximate distribution of PCP in the lower zone in March-April 1997, spring 1999, and February 2001. The PCP distribution in the lower zone in fall 2003 is shown on Figure 7-45. The PCP concentration contour maps indicate that groundwater contamination in the lower zone historically and currently consists of several discrete areas of contamination rather than a contiguous plume. Historically, the discrete areas were mainly located within and near the former PCP mixing area, in proximity to well

LW-11D, and in an area including wells LW-4D and RW-2. The historically highest PCP concentrations in groundwater in the lower zone occurred at well LW-4D (18,000 ppb in October 1997) have decreased significantly at this location, and since spring 1999, the PCP concentrations have been mostly below the laboratory reporting limits. Since November 2002, low level PCP concentrations (generally less than 1 μg/L) have also been detected on an intermittent basis in wells LW-6D located between LW-4D and the river and LW-10D located at the southern property boundary. These detections have not been observed on a consistent basis, which may be related to dilution of groundwater by river water at the groundwater-surface water interface (particularly in the lower zone where the river stage influence is greatest); natural attenuation processes (e.g., adsorption, biodegradation, etc.); or seasonal variability. Since October 2000, recovery well RW-2 has been pumping PCP-impacted groundwater from the lower zone, and has generally been effective in containing PCP-contaminated groundwater migration from the area surrounding the well.

Low concentrations of PCP (1 to 3  $\mu$ g/L) were detected in the deep sand unit at LW-12D2 sporadically (three times) during quarterly monitoring between May 1999 and June 2002. This well was subsequently abandoned in advance of the soil removal action in the former PCP mixing area. The historical detections in this well were likely due to downward vertical migration of contaminants via groundwater flow between the upper and lower zones. The source area for the impacts to the upper zone has been mitigated by the soil removal actions in 1989 and 2002, so the potential for ongoing groundwater impact in this area is considered to be low.

The concentrations of diesel-range and gasoline-range petroleum hydrocarbons and VOCs detected in wells downgradient of the former PCP mixing area are likely due to the presence of PCP carrier oils (e.g. mineral spirits) that are present as LNAPL and the partitioning of these constituents into groundwater. The distribution of detected petroleum hydrocarbon concentrations in this area is consistent with the intermittent presence of LNAPL observed in well LW-11S and the recent occurrence of LNAPL at wells OX-1S, OX-2S, and LX-3S and the presence of elevated PCP concentrations in groundwater. The intermittent nature of LNAPL occurrences at LW-11S appears to be related to seasonal groundwater fluctuations, such that residual LNAPL is observed in nearby monitoring wells under low water table conditions or to effects from the ISCO implementation events.

# 8.3.2 TANK FARMS

Soil contamination in the Main Terminal and Bell Terminal Tank Farm areas occurs primarily at depth within the capillary fringe. Contamination in the soil above the capillary fringe is present, but typically at lower concentrations. The elevated concentrations of contaminants within the capillary fringe

in the Main Terminal and Bell Terminal Tank Farm areas indicates that releases of petroleum substances to the ground surface were historical and that NAPL has had sufficient time to migrate downward and spread laterally within the capillary fringe. The presence of the same contaminants both in groundwater and in soil indicate that these contaminants have partitioned from the soil and/or NAPL into the groundwater. Most of the shallow soil samples containing elevated petroleum hydrocarbon concentrations did not contain elevated benzene or ethylbenzene concentrations, indicating that the low molecular weight aromatics (e.g., BTEX) that may have once been present have undergone biodegradation or volatilization, or have been removed by infiltrating precipitation.

In the Main Terminal Tank Farm area, contaminants are present in the upper and lower zone groundwater. However, contamination of the lower zone groundwater is typically found only in the western portion of the Main Terminal Tank Farm area where a silt layer separating the upper and lower zones does not exist or is discontinuous. In this portion of the Main Terminal Tank Farm area, only a single unconfined groundwater zone exists. In the eastern portion of the Main Terminal Tank Farm area, where the silt layer separating the upper and lower groundwater zones is present, contaminant concentrations in the lower zone groundwater are typically low and are primarily detected near where the silt layer pinches out or becomes discontinuous. This suggests that the silt layer over much of the western portion of the Main Terminal Tank Farm area provides a natural geologic/hydrogeologic boundary between the upper zone groundwater and the lower zone groundwater, limiting the vertical migration of contaminants over this portion of the Main Terminal Tank Farm area, or that the characteristic of the contaminant does not lend itself to vertical migration.

In the Bell Terminal Tank Farm area, contaminants are present in the upper zone groundwater, but not in the lower zone groundwater. The lack of contaminants in the lower zone groundwater indicates that the silt layer is acting as an impermeable boundary and the two groundwater zones are not interconnected in this area. Concentration contours for selected contaminants in upper zone and lower zone groundwater discussed in Section 7.0 indicate that lateral migration in the downgradient groundwater direction has occurred. The lateral migration is likely a combination of the individual contaminant properties (e.g., solubility) and the processes of advection, hydrodynamic dispersion, and adsorption. The lack of contaminants in groundwater upgradient of the source areas indicates that contaminant migration in groundwater is primarily due to advection (transport of constituents by groundwater movement). For contamination in the groundwater along the western property boundary of the Bell Terminal Tank Farm area or on the former PEO property, there is not enough information about the nature of the release to determine the mechanisms affecting migration. However, the downgradient extent of the diesel-range and gasoline-range petroleum hydrocarbon plumes in the Bell Terminal Tank Farm area suggests that lateral movement of the contaminants is slow, which may be due to a low rate of

advection in this area; possible natural attenuation (through adsorption, biodegradation, etc.); and/or volatilization.

The distribution of petroleum constituent concentrations within and downgradient of the Bell Terminal tank farm area suggest the presence of three commingled groundwater plumes, as discussed earlier. Even though it is likely that the plume originating from the central portion of the Bell Terminal commingles with the plume originating near the western property boundary, and that both of these plumes commingle with other contamination originating on the former PEO property in the area where the former diesel ASTs were located, it is unlikely that the elevated concentrations observed near the western property boundary or on the former PEO property originate from the Bell Terminal tank farm operations. This conclusion is based on the significant increase in both soil and groundwater concentrations for petroleum constituents across the western property boundary and on the former PEO property. Because the confining unit boundary on the former PEO property is estimated within the likely source area where the former diesel ASTs were located on the eastern portion of the PEO property, the elevated groundwater concentrations in this area could reflect groundwater contamination resulting from direct releases to soil where the confining unit is not present or downgradient flow of contaminated groundwater from the upper zone across the confining unit boundary. However, in the latter case, concentrations would typically decrease instead of increase in the downgradient direction.

#### 8.3.3 CROSBY & OVERTON TANK AREA

As discussed above, contamination of soil within the former Crosby & Overton tank area is anticipated to be the result of waste oil spills from the tanks historically located within this area. Because PAHs and PCBs tend to absorb or bind to soil, contamination in this area was anticipated to be limited to the upper few feet of surface soil. As part of the soil removal action conducted for the former PCP mixing area and soil stockpile, impacted soil was excavated from this area and disposed offsite. Remaining PCP and cPAH concentrations in soil at completion of the removal action are shown on Figures 2-5 and 2-6 and confirm that the vertical extent of the contamination was limited. Because historical releases in this area resulted in contamination that was limited to surface soil and groundwater contamination has never been observed in this area, the concentrations remaining in soil are considered to be protective of groundwater and additional cleanup in this area is not necessary.

# 9.0 SCOPE OF FUTURE ACTIVITIES

This section outlines the scope of future activities to be conducted in support of the Phase II and Phase III RIs for the Terminal. The future Phase II RI activities will include the continued monitoring of the Phase II wells to assess the effectiveness of the continuing implementation of the groundwater interim action, full-scale ISCO injections within the extent of the PCP plume in the upper zone, and performance of a source control evaluation to assess the potential for impacts to the Willamette River. The future Phase III RI activities will include the quarterly sampling of the recently installed Phase III monitoring wells as part of the on-going quarterly monitoring program. With completion of the RI, a risk assessment and feasibility study will be initiated for the Terminal. The anticipated scopes of work for these activities are summarized in the following sections.

# 9.1 PHASE II/III GROUNDWATER MONITORING

For assessment of the effectiveness of the Phase II groundwater interim action and implementation of the full-scale ISCO technique, groundwater monitoring will be continued at the Phase II monitoring locations. In a letter to DEQ dated February 2, 2004 (Landau Associates 2004d), a request was made to modify the Phase II sampling program beginning with the first quarter 2004 sampling event. These changes were implemented during the first quarter 2004 upon verbal approval by DEQ (2004c); DEQ has indicated that they will provide written approval soon. Below is a summary of the changes to the Phase II sampling program:

- Elimination of eight wells from the Phase II sampling program for future events. These wells include five upper zone wells (H, K, L, LW-1S, and LW-5S), and three lower wells (O, R, LW-1D).
- Reduction of the monitoring frequency for selected Phase II wells from quarterly to semiannually. Twenty-four Phase II wells were proposed for semiannual sampling, including wells B1, B2, D, J1, J2, LW-3D, LW-4S, LW-4D, LW-11S, LW-11D, LW-13S, LW-14D, LW-15D, LW-16D, OX-1S through OX-8S, OX-8D, and RW-1. Any other Phase II wells not included in this list were retained for use in quarterly evaluations with wells installed as part of the Phase III RI, and for evaluation of performance of the groundwater interim action system.

In addition to the sampling of the Phase II monitoring wells, the recently installed Phase III monitoring wells will be sampled for four consecutive quarters (1 year), or as necessary, to adequately assess environmental conditions within the Phase III study area and to complete the hydrogeologic conceptual model. The first quarterly sampling of the wells installed during October and November 2004 was conducted in November 2004. The final quarterly sampling of the Phase III wells will is anticipated to occur in August 2005. The analytical results for the Phase II and Phase III sampling events for the

Terminal will continue to be documented in quarterly groundwater monitoring reports that will be submitted to DEQ.

# 9.2 GROUNDWATER INTERIM ACTION

The objective of the ongoing groundwater interim action is to contain the PCP plumes identified in the upper and lower zones at the Terminal and prevent contaminant migration offsite across the southern property boundary or to the Willamette River. Capture of the PCP plume within the lower zone will be maintained by the continued pumping of recovery well RW-2. Additionally, seasonal pumping of horizontal well HRW-1 within the upper zone and pumping from the groundwater intercept system in the storm drain at SDM-1 will be continued. Alternatives for full–scale remediation of the PCP plume in the upper zone will be evaluated in the feasibility study. Groundwater interim action activities at the Terminal will continue to be documented in the quarterly groundwater monitoring reports.

#### 9.3 FULL- SCALE ISCO IMPLEMENTATION

To further facilitate the remediation of PCP contamination in the groundwater and soil at the Terminal following the 2002 soil excavation in the lower PCP mixing area, the ISCO technique was implemented as an interim remedial alternative for PCP in the upper zone in July 2004 and January 2005. The results from the July 2004 are summarized in Section 2.2.2.7 and presented in the Third Quarter 2004 groundwater monitoring and groundwater interim action status report (Landau Associates 2005a). The January 2005 results are pending. Another ISCO event is anticipated for the fall of 2005 or winter 2006 when elevated water levels will maximize the effectiveness of the technique.

# 9.4 SOURCE CONTROL EVALUATION

A source control evaluation will be conducted to determine whether or not the facility as a whole is an ongoing source of COIs to the in-water portion of the Portland Harbor Superfund site at levels that may present risk to in-water receptors. Based upon the data collected during the RI/FS for the Terminal, the source control evaluation will consider all potential migration pathways to the river.

The source control evaluation will focus on the potential for an upland petroleum hydrocarbon source to impact the Willamette River (i.e., the potential for NAPL that has been observed in the Main Terminal Tank Farm to impact the river). Time Oil has demonstrated that, even though there is a physical groundwater transport pathway from the upland areas of the terminal to the river, there is not a complete exposure pathway via groundwater to potential receptors in the Willamette River for facility-related contaminants at concentrations above the applicable screening levels, based on groundwater

concentrations in Willamette River shoreline wells. The evaluation will include the collection of geochemical data to evaluate the potential for natural attenuation to limit the potential for NAPL to migrate to the river and the use of a fate and transport model that takes into account the effects of natural attenuation. The results of the source control evaluation will be provided to DEQ in a report that will provide recommendations on the effectiveness of use of natural attenuation to prevent migration of NAPL to the river.

#### 9.5 RISK ASSESSMENT

Time Oil will submit a work plan for conducting human health and ecological risk assessments for the Terminal. The risk assessments will be conducted in accordance with OAR 340-122-084 and DEQ's risk assessment guidance (DEQ 1999, 2000b). The risk assessment approach will include use of the combined Phase II and III data sets for identification of COPCs/CPECs, and exposure scenarios for both human health and ecological risk. The work plan will be provided to DEQ for approval. Following approval of the risk assessment approach by DEQ, a document providing the results of the COPC/CPEC identification and the human health and ecological risk assessments will be provided to DEQ. The risk assessment will also include identification of hot spots of contamination in soil and groundwater using acceptable risk levels identified for the Terminal.

# 9.6 FEASIBILITY STUDY

In accordance with the Phase I/II RI/FS work plan and the VCP agreement with DEQ, a feasibility study (FS) will be conducted to develop and evaluate remedial action alternatives for contaminated media, which will achieve remedial action objectives and that are protective of human health and the environment. The FS will be conducted in accordance with OAR 340-122-085 and DEQ's *Guidance for Conducting Feasibility Studies* (DEQ 1998d).

The FS evaluations will include assessment of remedial action alternatives for soil and groundwater contamination remaining within the Phase II former PCP mixing area after the soil removal action conducted in the fall of 2002, and for Phase III source areas identified in Section 7.0.

As described in the Phase I/II RI/FS work plan and according to DEQ guidance, the FS process will include the following:

- Developing remedial action objectives
- Delineating affected media
- Developing and evaluating general response actions, technologies, and process options

- Developing and evaluating specific remedial alternatives
- Recommending a preferred alternative
- Documenting the FS in a written report.

It is anticipated that recommendations for the Phase II and Phase III FS will be contingent on approval of the results from the risk assessment by DEQ.

# 10.0 PROPOSED SCHEDULE

The proposed schedule for the remaining elements of the RI/FS at the Terminal is provided below. The subsequent elements for the project include: conducting a source control evaluation, preparing an approach for the human health and ecological risk assessments for the combined Phase II and Phase III study areas of the terminal, implementing the risk assessments, and conducting the Terminal-wide FS. Planned intermediate deliverables are provided in the schedule below. As described in Section 9.0, other planned activities include quarterly groundwater monitoring, continuation of the groundwater interim action, and continued implementation of full-scale ISCO remediation. The groundwater interim action is ongoing and not included in the schedule elements below.

The proposed schedule is based on assumptions consistent with current knowledge and experience; the schedule may change if deviations occur in the program implementation and in the assumptions for DEQ document review time. The schedule will be updated and provided to DEQ as shifts in the schedule occur.

# **RI/FS Deliverables:**

Review/Approve the Final Phase III RI Report by DEQ	September 2005
Submit the Source Control Evaluation Approach to DEQ	September 2005
Submit the Risk Assessment Work Plan to DEQ	December 2005
Review/Approve the Risk Assessment Work Plan by DEQ	March 2006
Submit Source Control Evaluation Report to DEQ	March 2006
Submit the Human Health and Ecological Risk Assessments to DEQ	July 2006
Review/Approve the Risk Assessment by DEQ	September 2006
Submit the FS to DEQ	November 2006
Review/Approve the FS by DEQ	January 2007

# **Groundwater Monitoring:**

Submit the First Quarter 2005 Groundwater Report to DEQ	August 2005
Submit the Second Quarter 2005 Groundwater Report to DEQ	October 2005
Conduct the Third Quarter 2005 Groundwater Monitoring Event	August 2005
Receive Approval from DEQ on Reduction of Sampling Frequency	November 2005
Submit the Third Quarter 2005 Groundwater Report to DEQ	December 2005

#### **Full-Scale ISCO Remediation:**

Third Full-Scale ISCO Event Winter 2006

# 11.0 USE OF THIS REPORT

This Phase III Remedial Investigation Report has been prepared by Landau Associates for the exclusive use of Time Oil Co. for specific application to the Northwest Terminal. Services for this project were conducted in accordance with the Environmental Services Contract between Time Oil Co. and Landau Associates, Inc. Landau Associates has performed our services in accordance with generally accepted engineering and consulting standards for environmental work in effect at the time and locality services were performed. The reuse of information, conclusions, and recommendations provided herein by Time Oil Co. or others in connection with any site other than the Northwest Terminal without Landau Associates written permission shall be at the sole risk of Time Oil Co. and without liability to Landau Associates.

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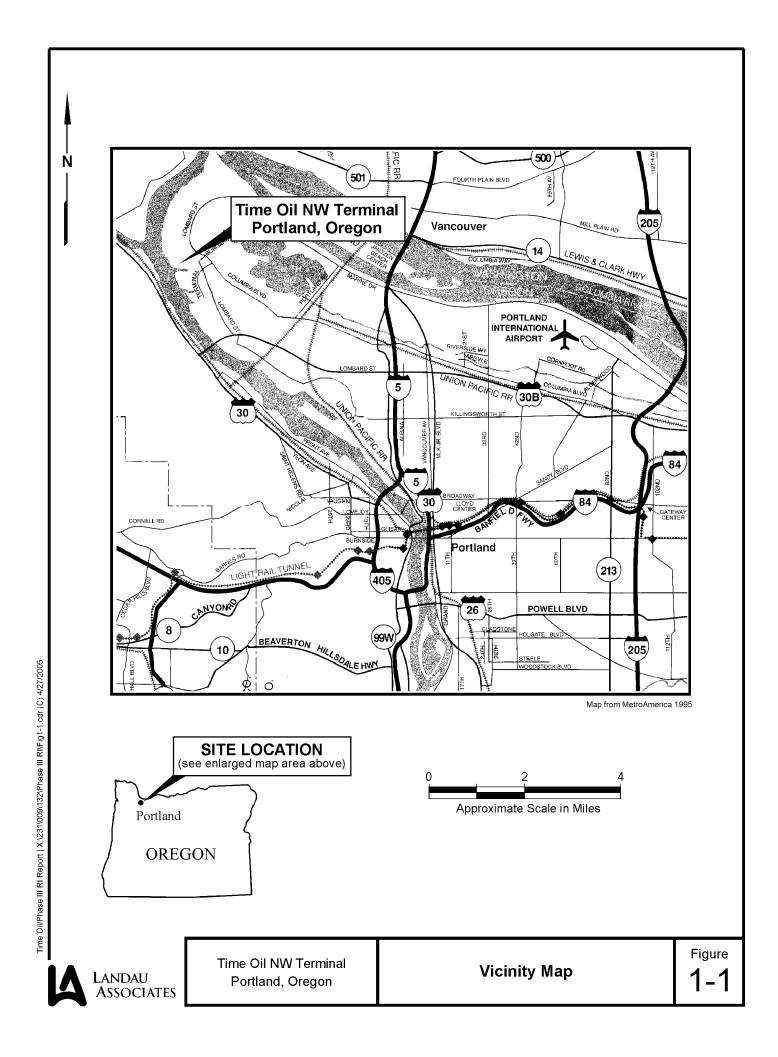
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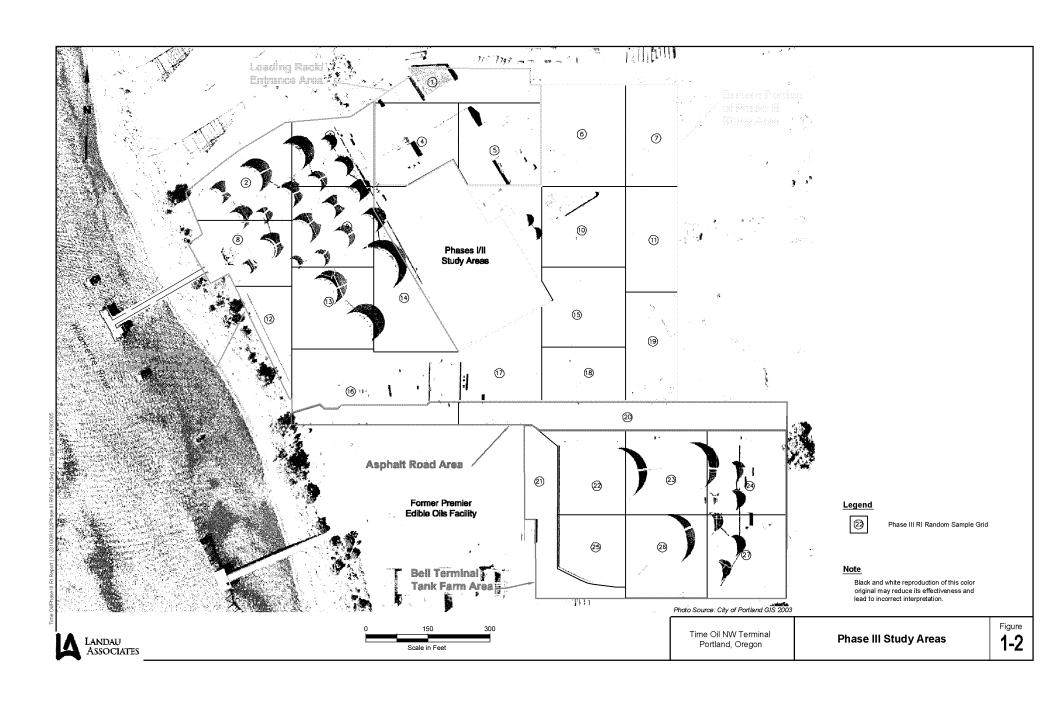
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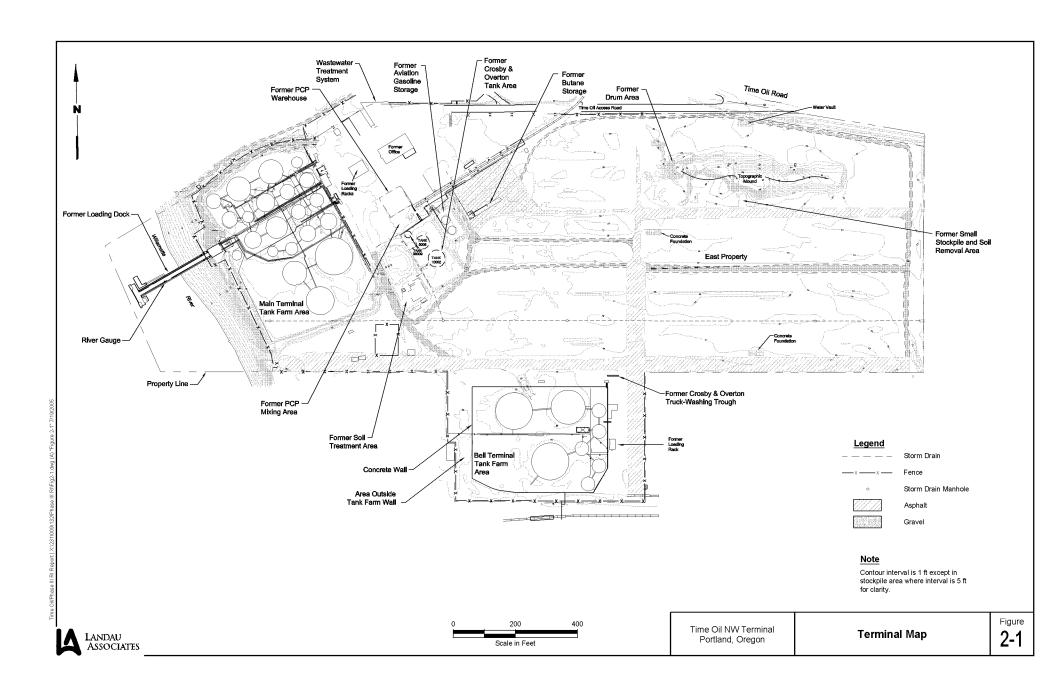
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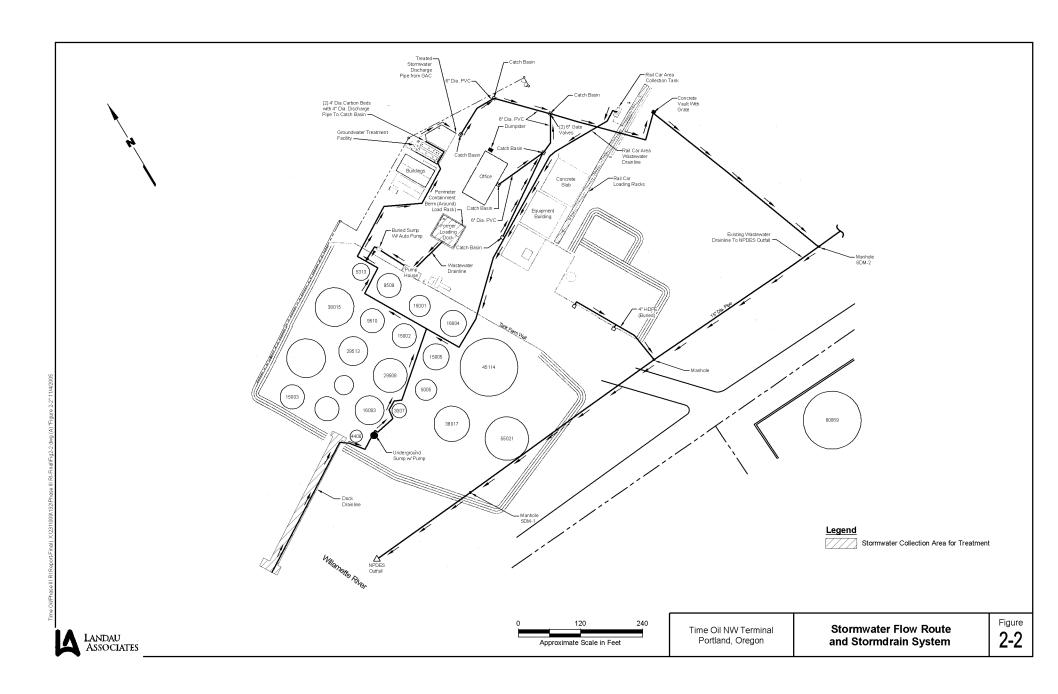
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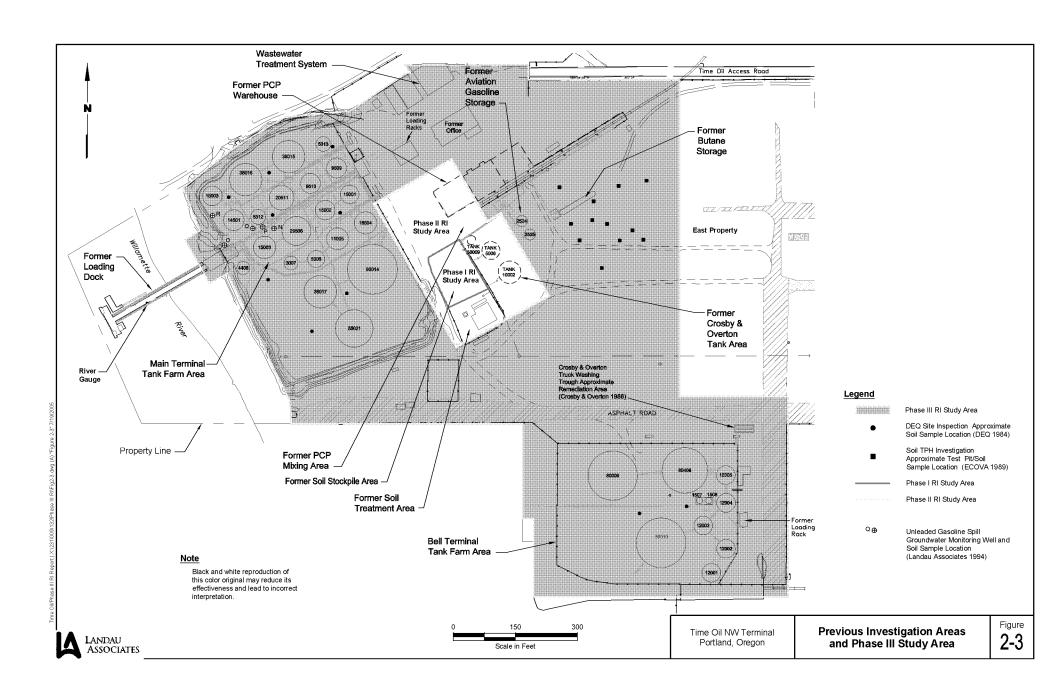
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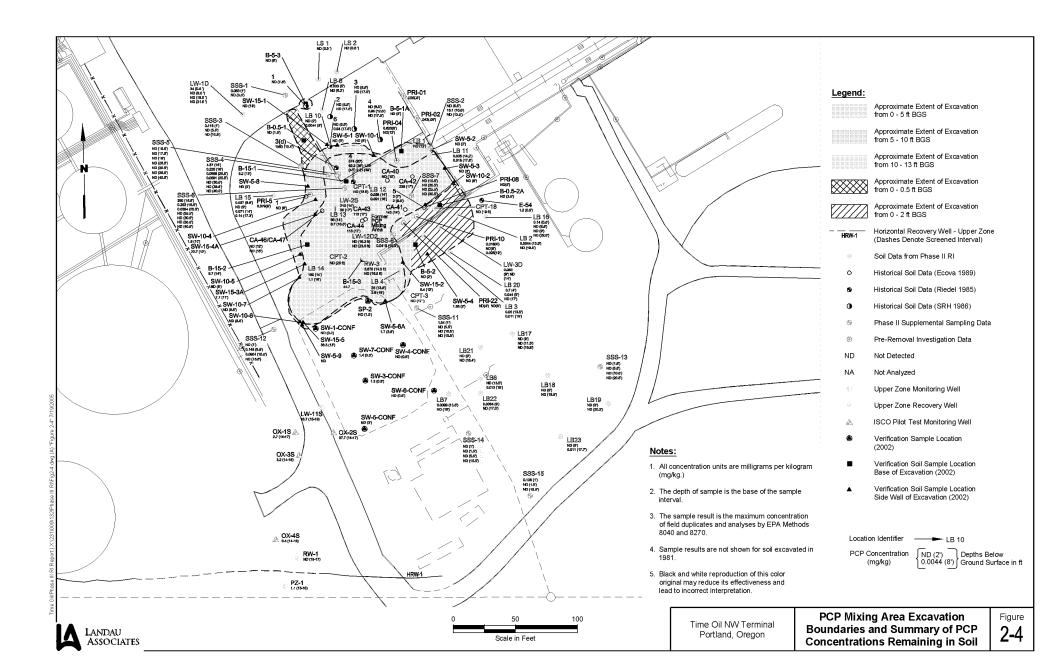


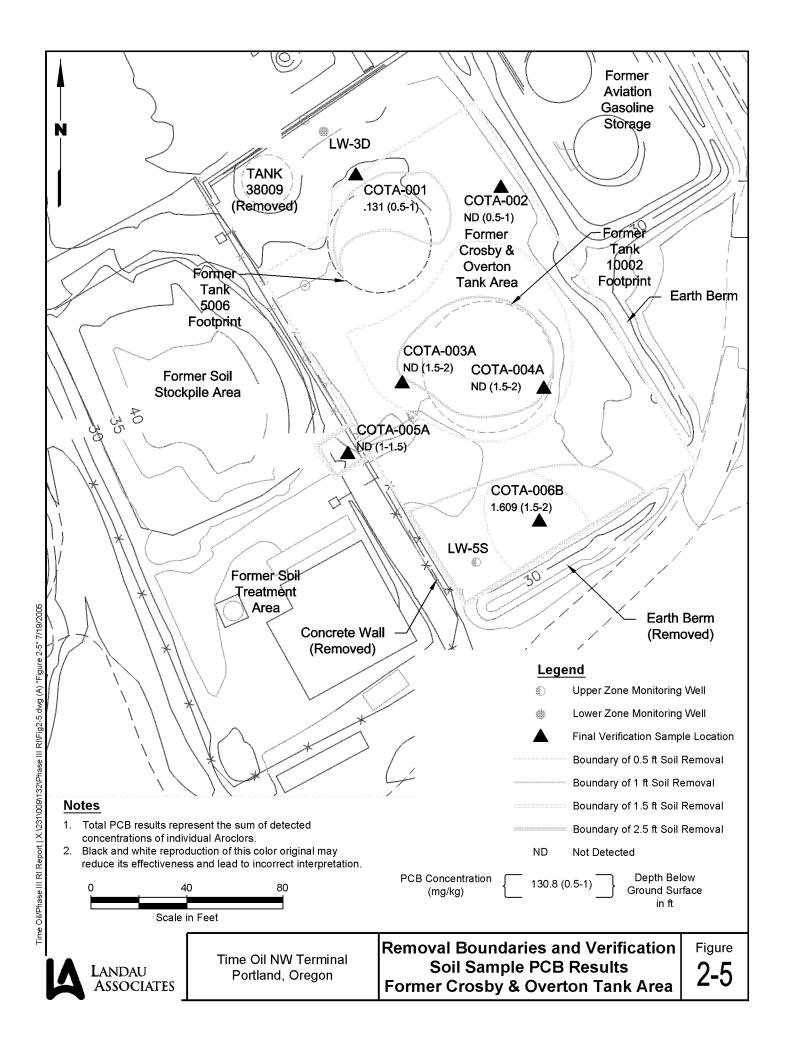


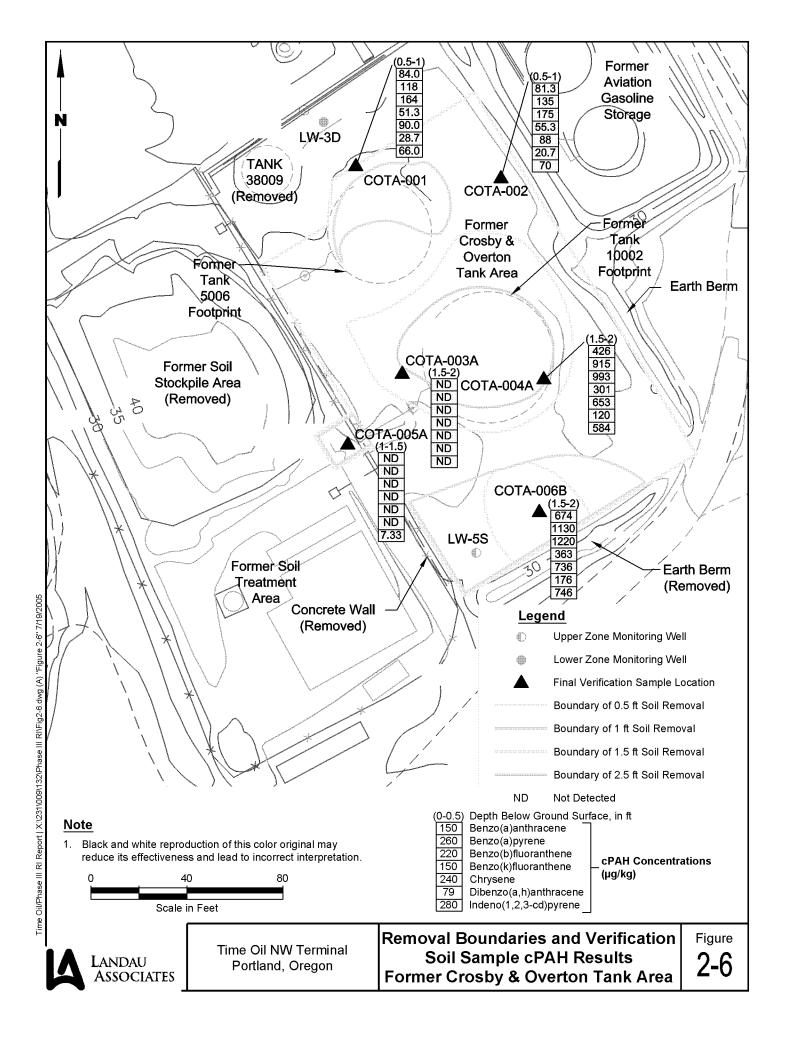


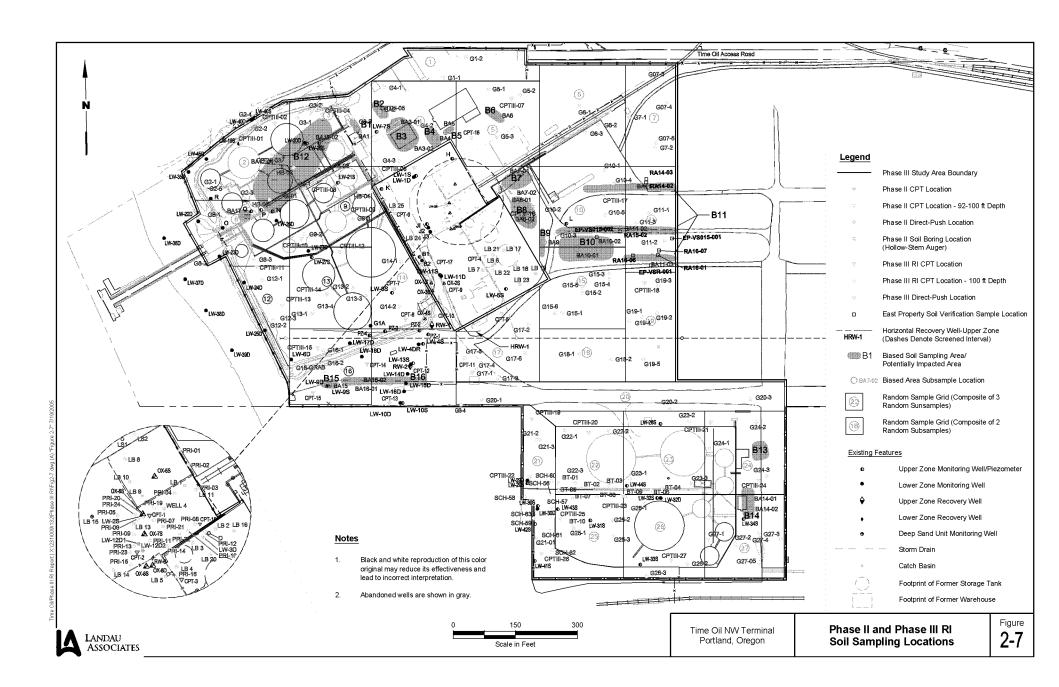


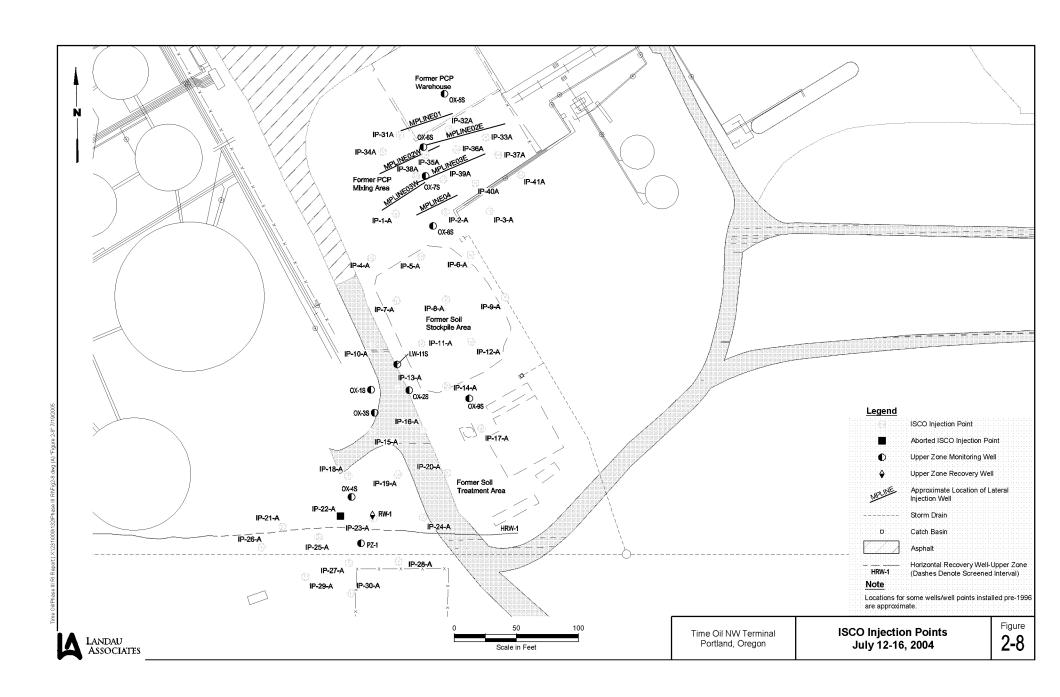


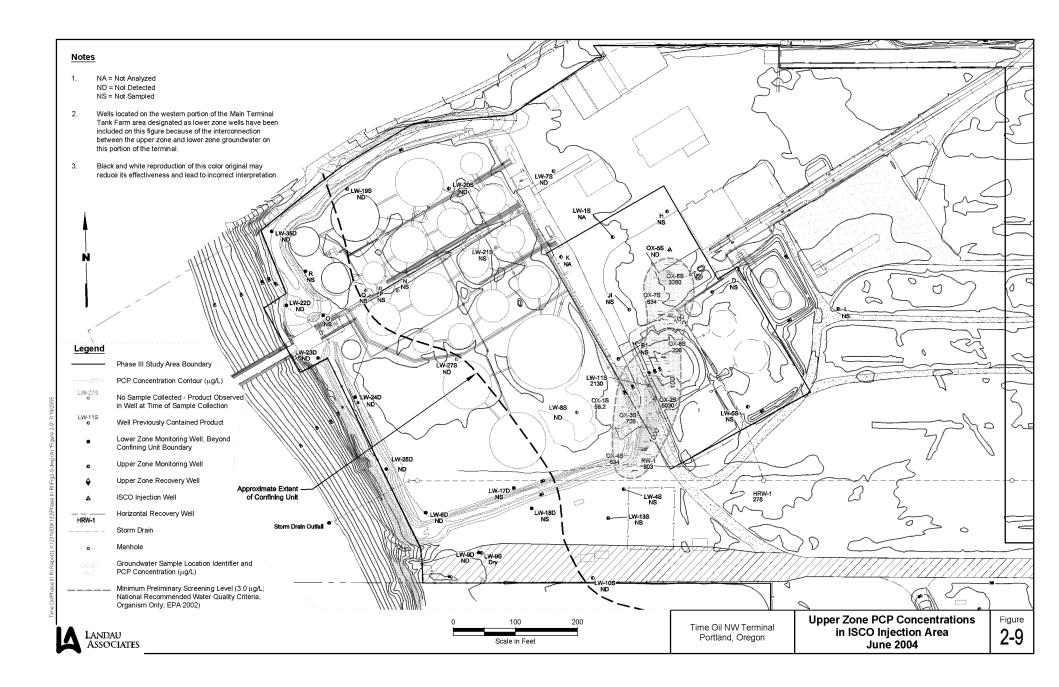


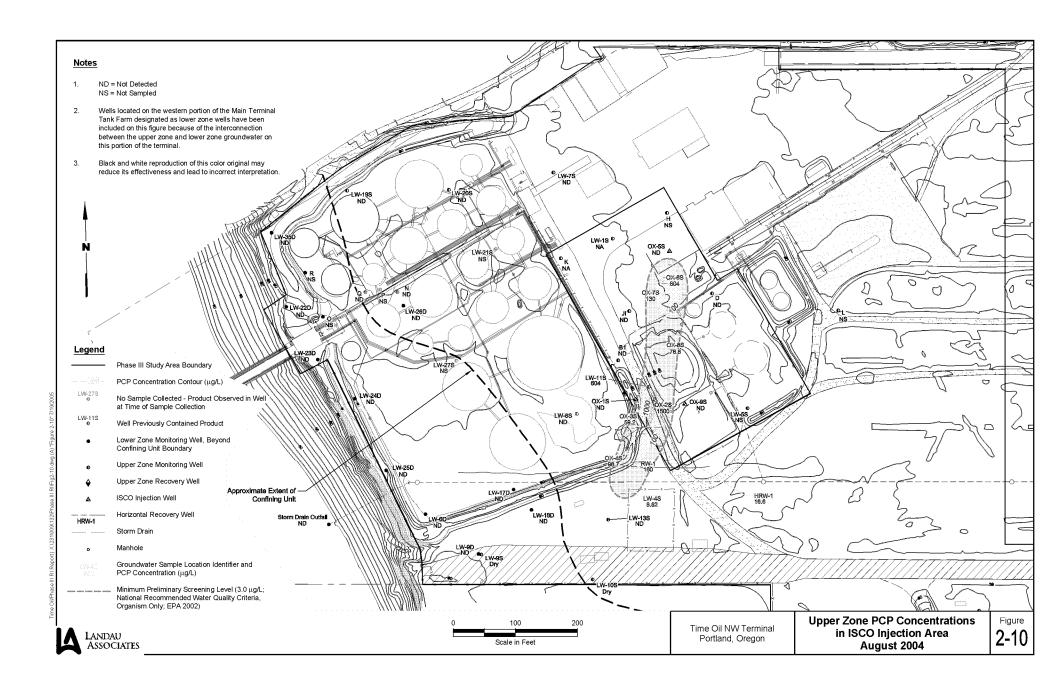


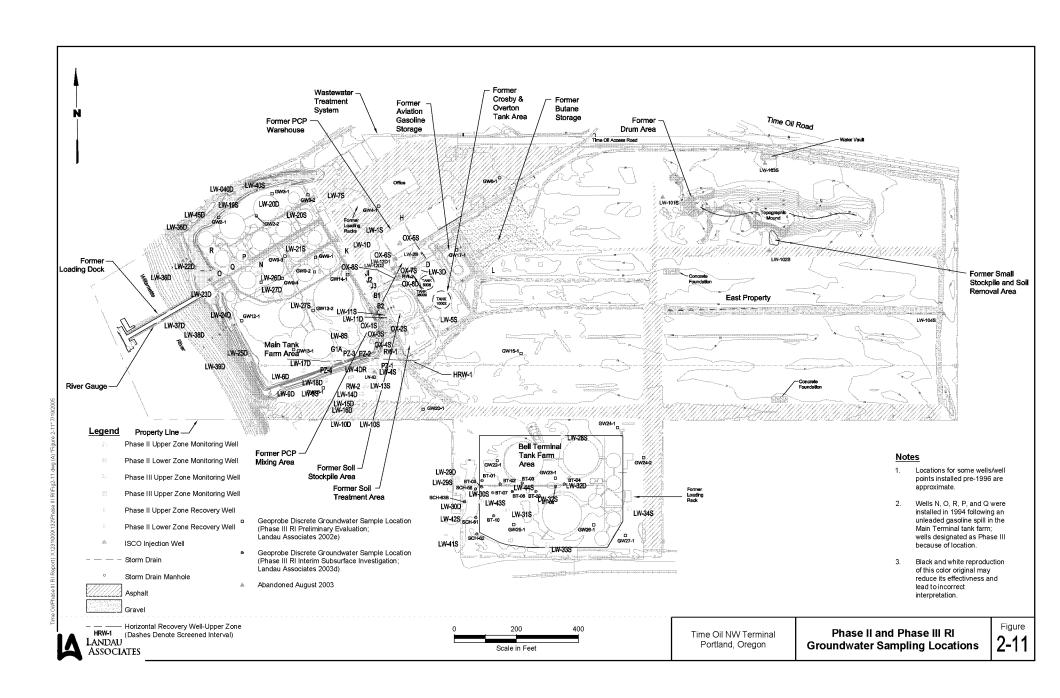


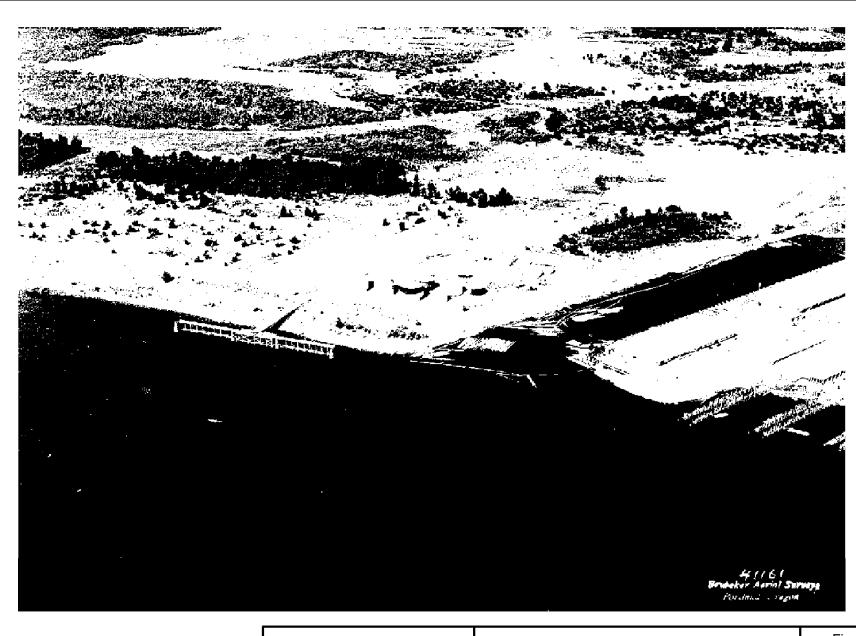










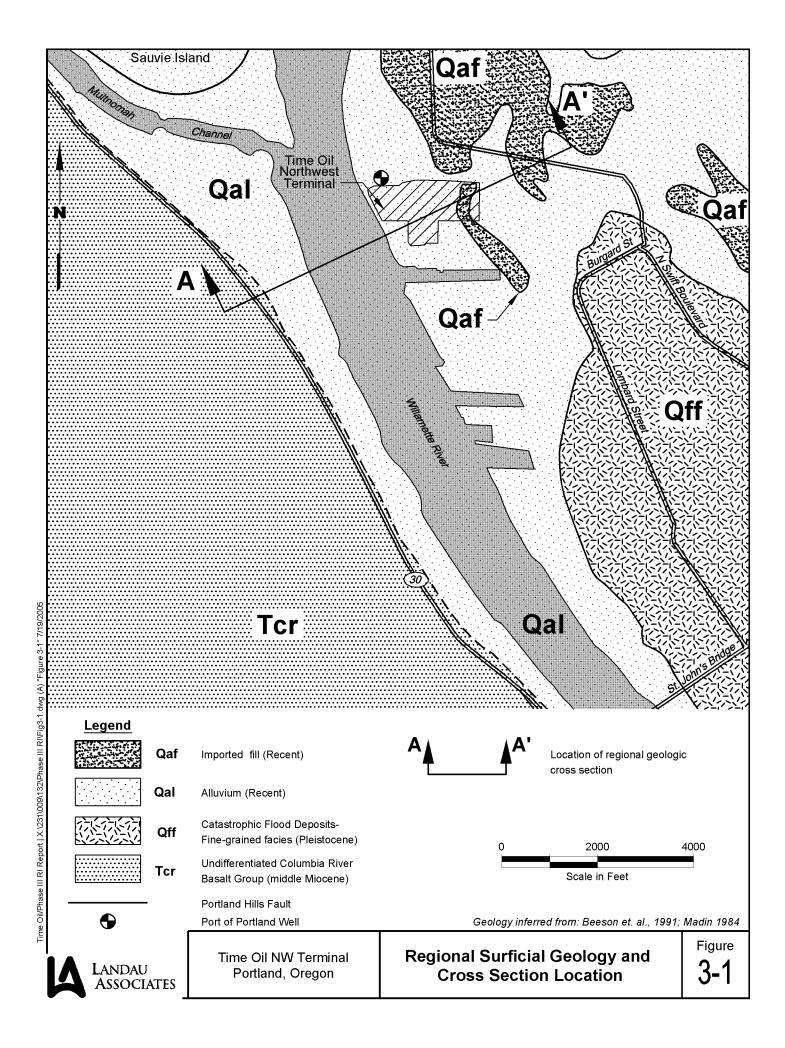




Time Oil NW Terminal Portland, Oregon

Historical Aerial Photograph – 1939

Figure 2-12



Tualatin Mountains

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Willamette River

Time Oil Northwest Terminal

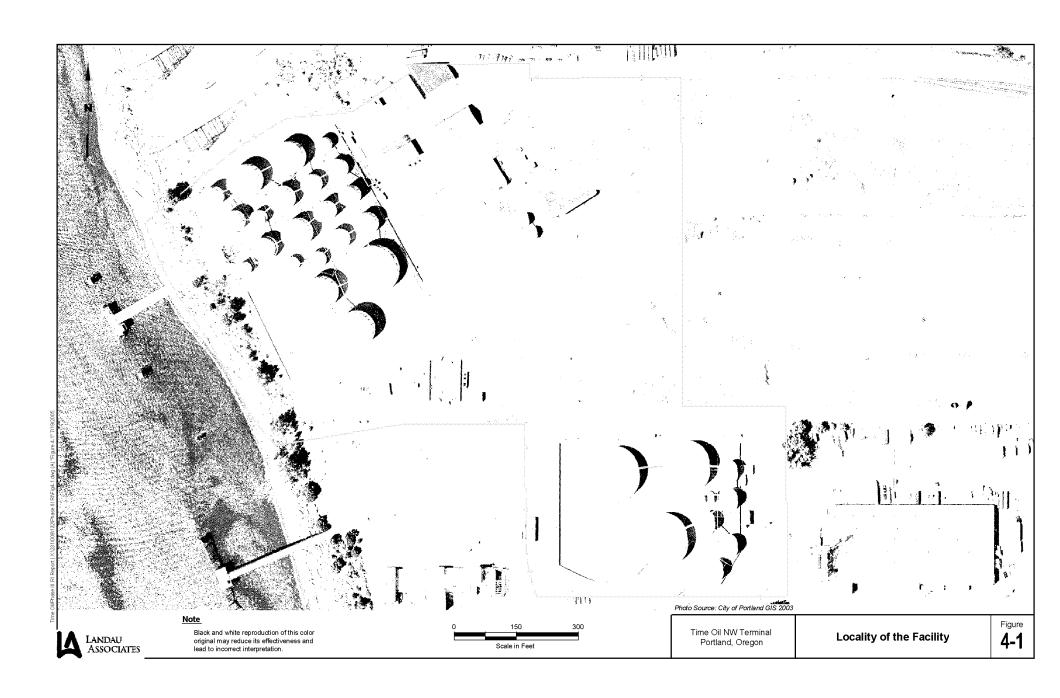
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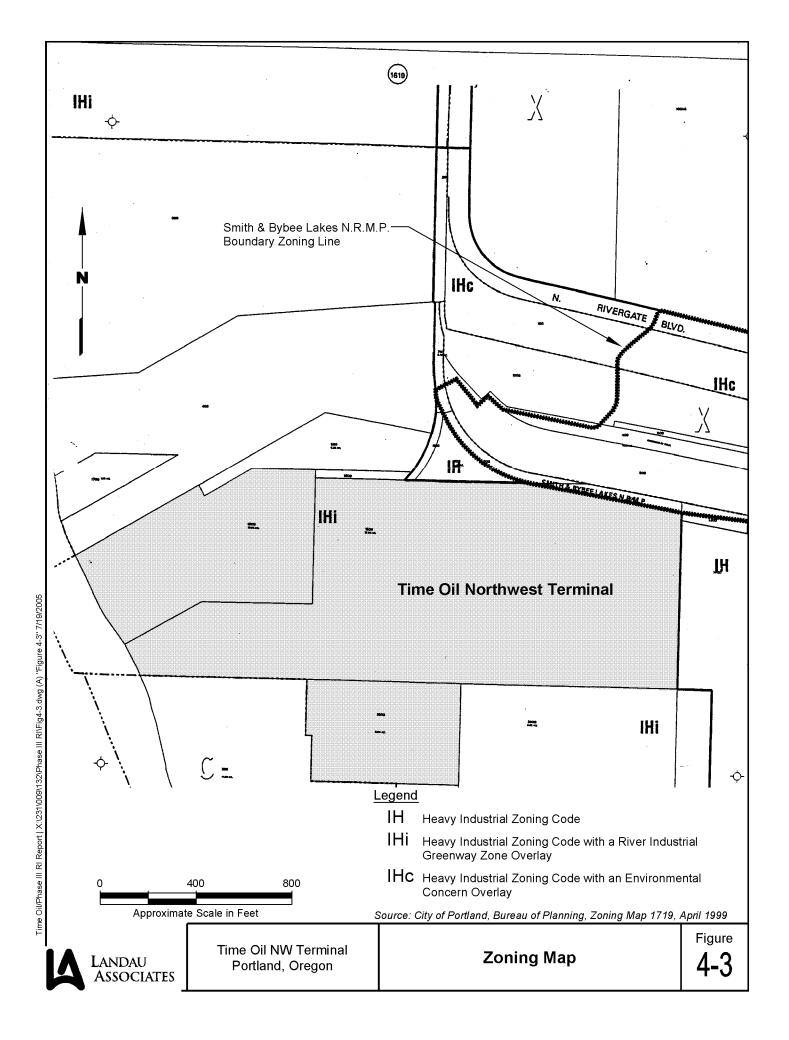
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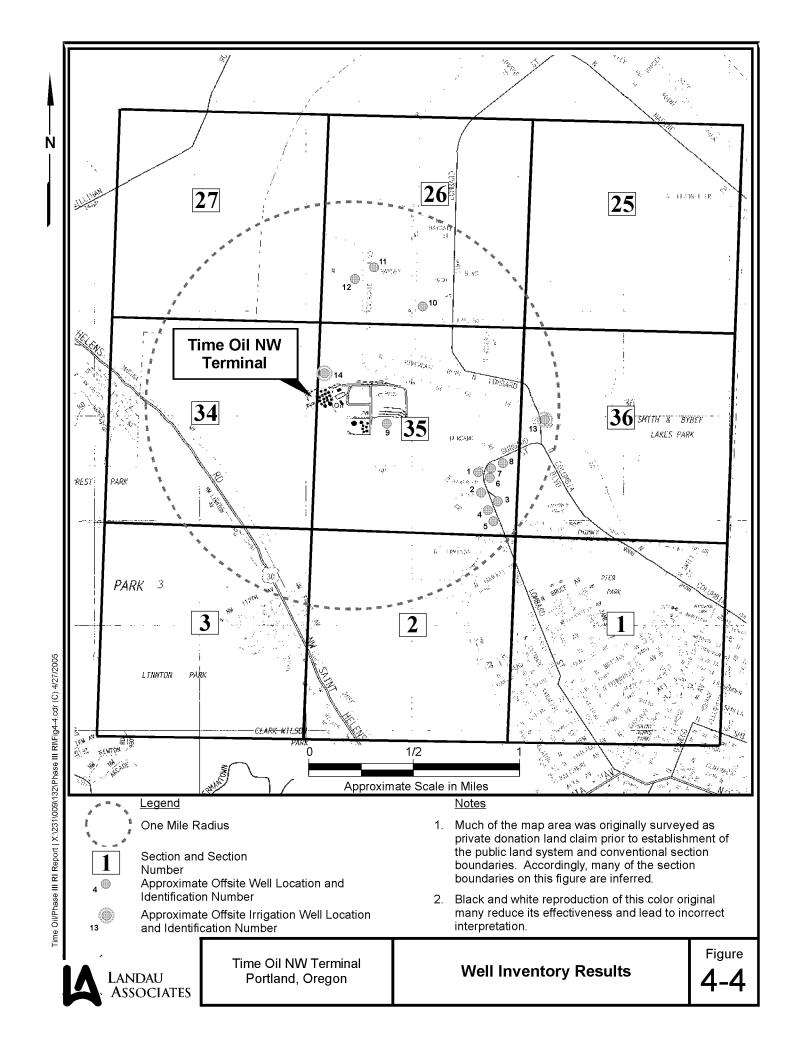
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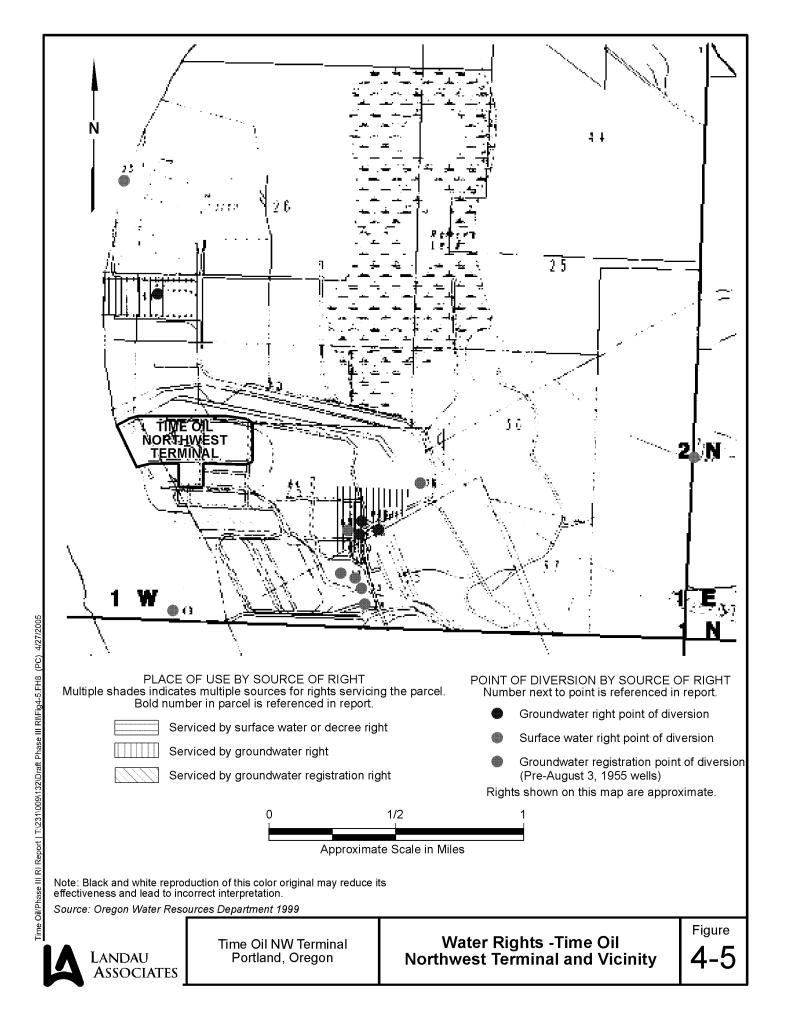
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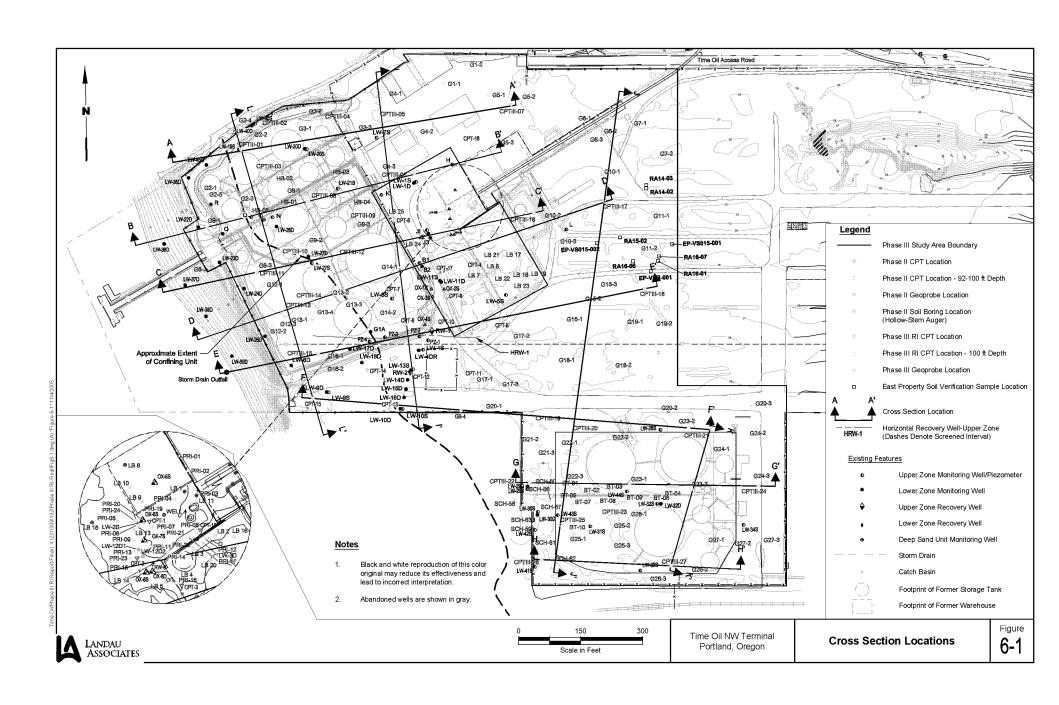
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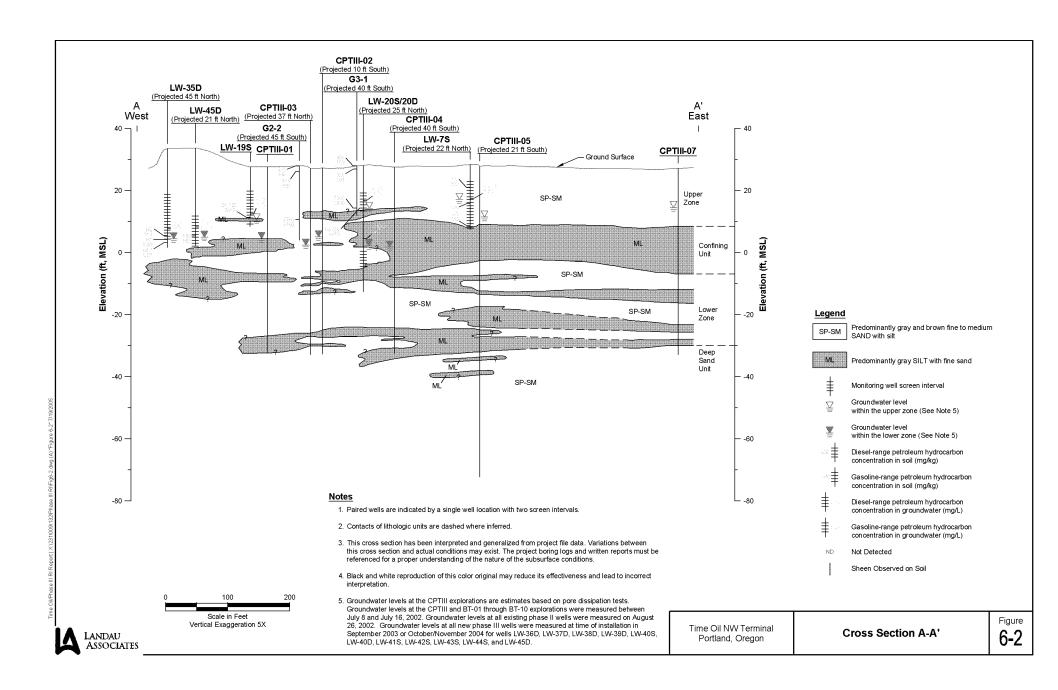


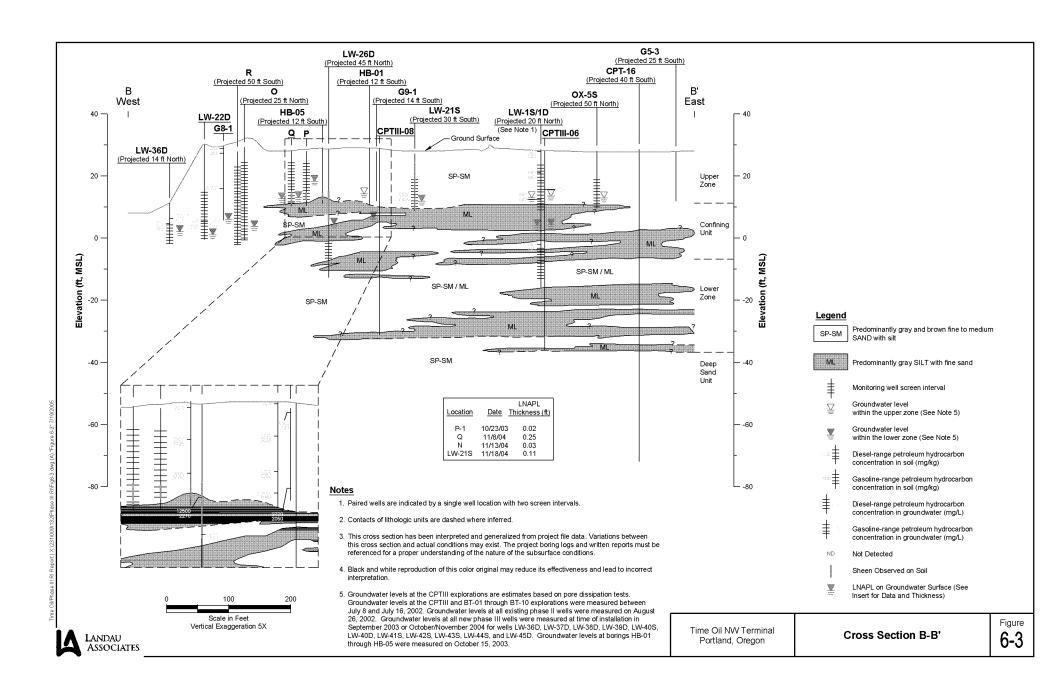


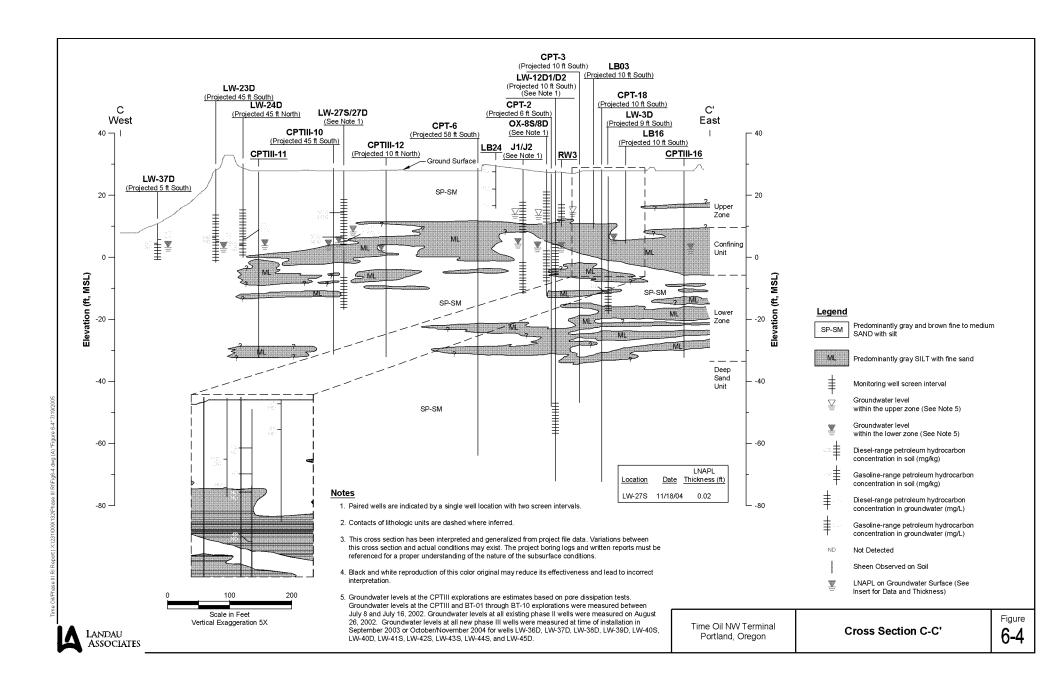


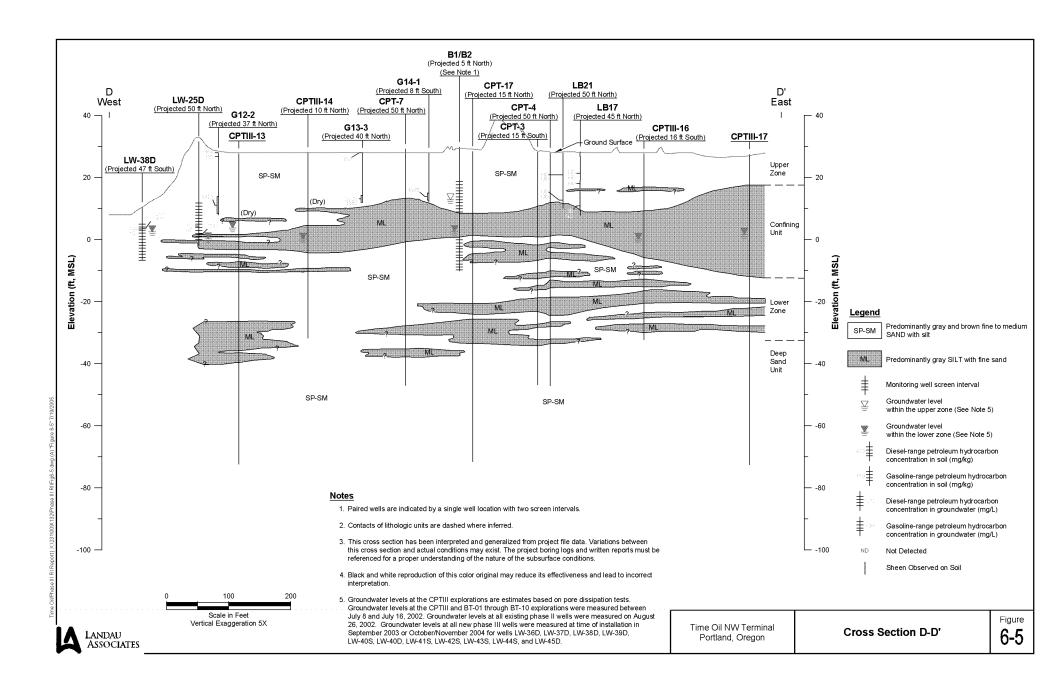


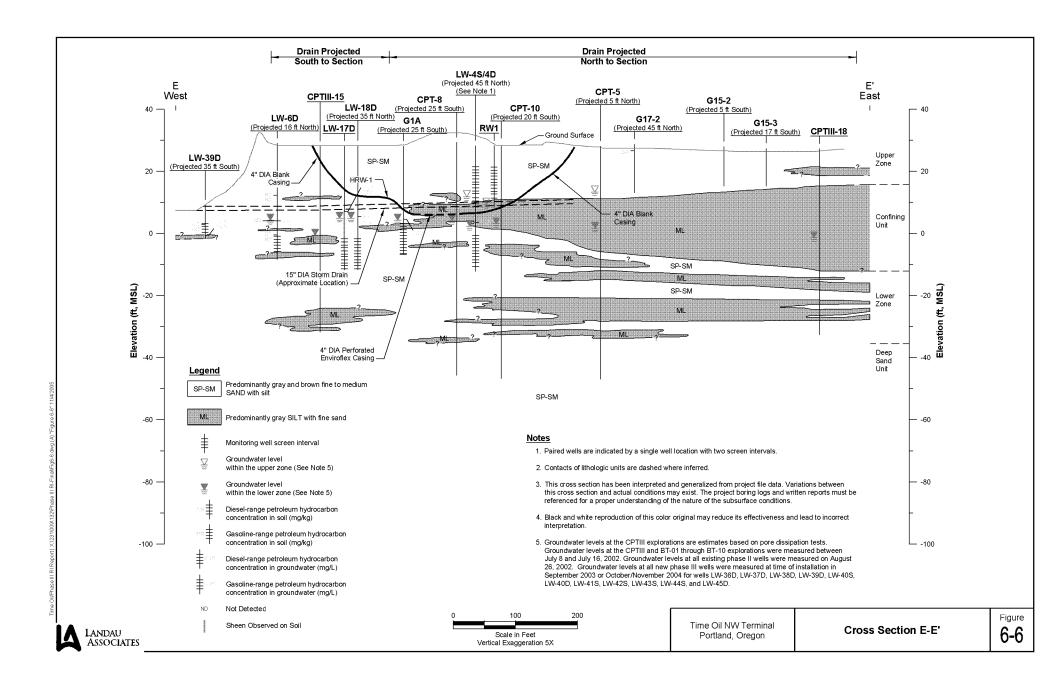


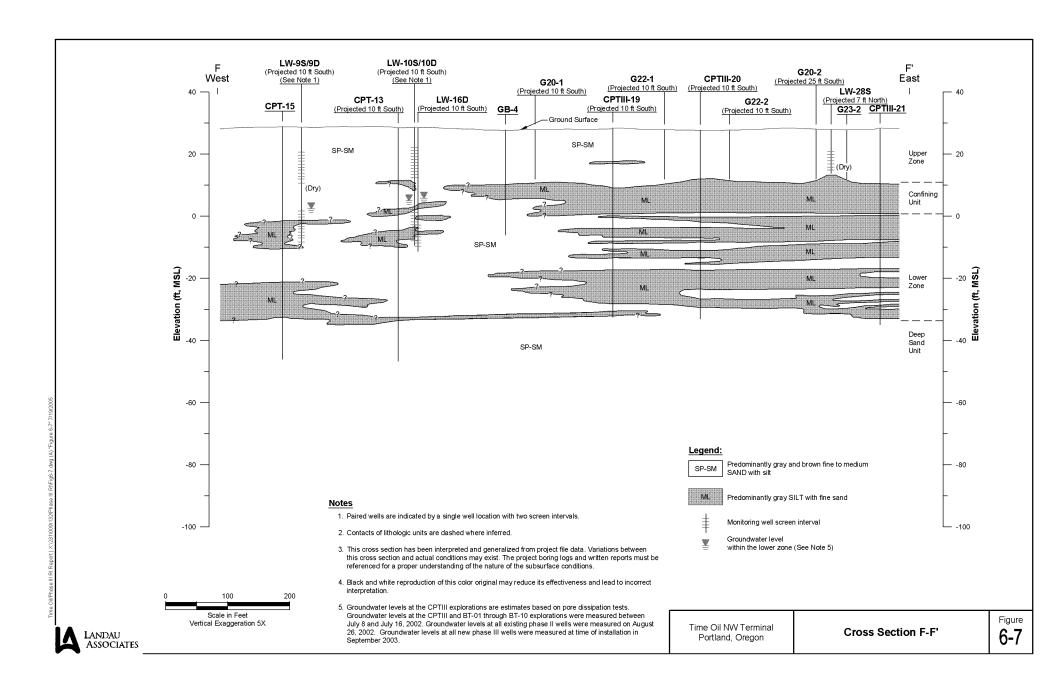


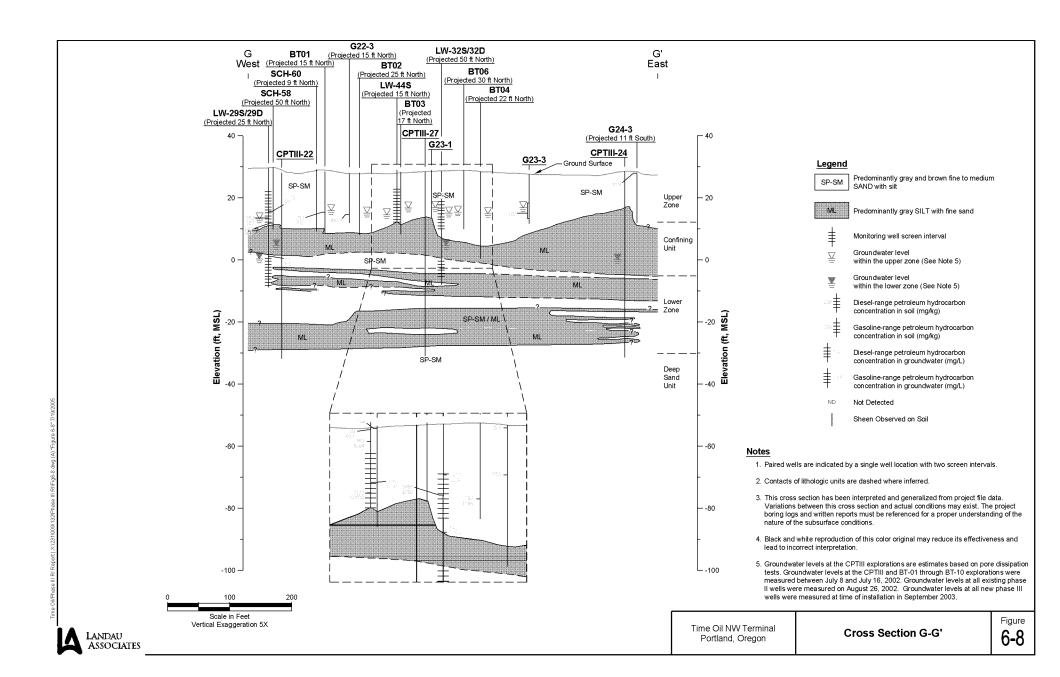


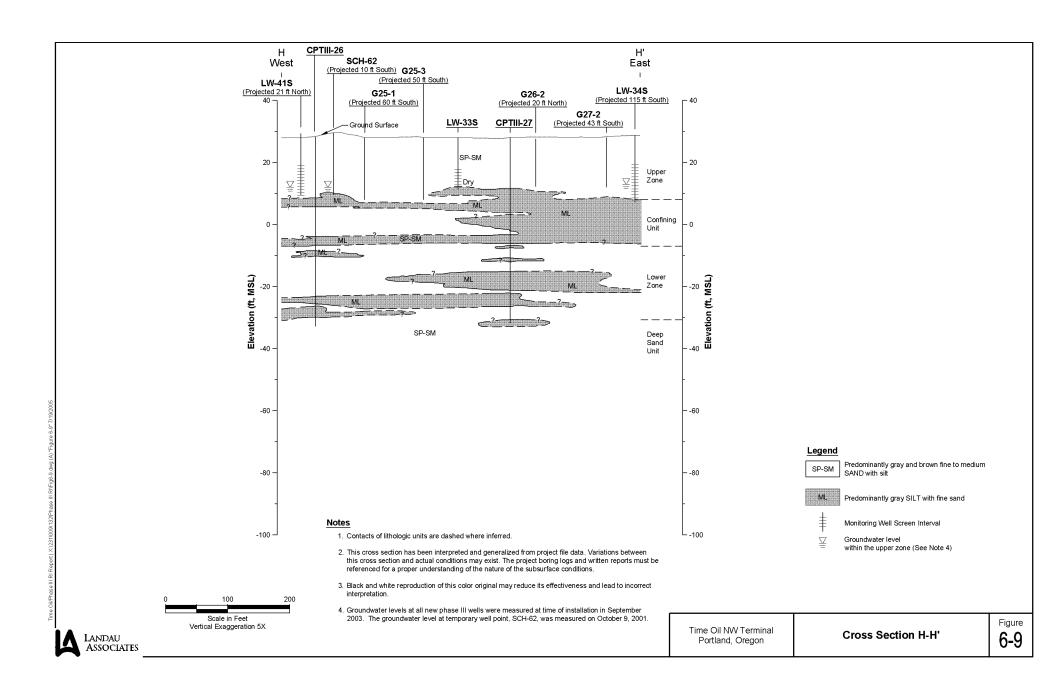


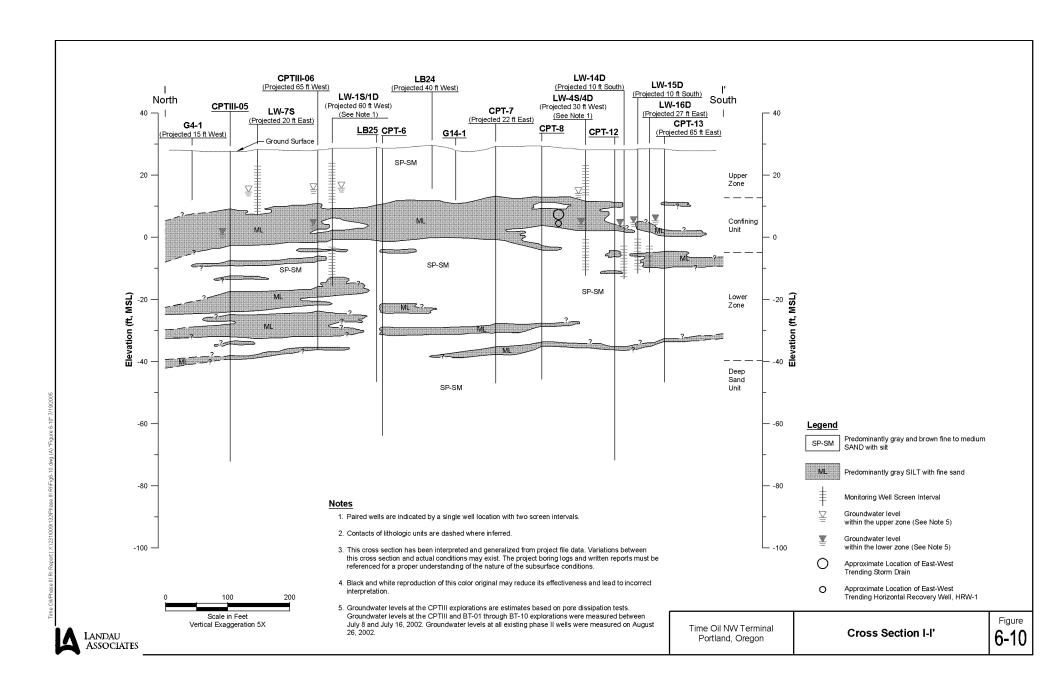


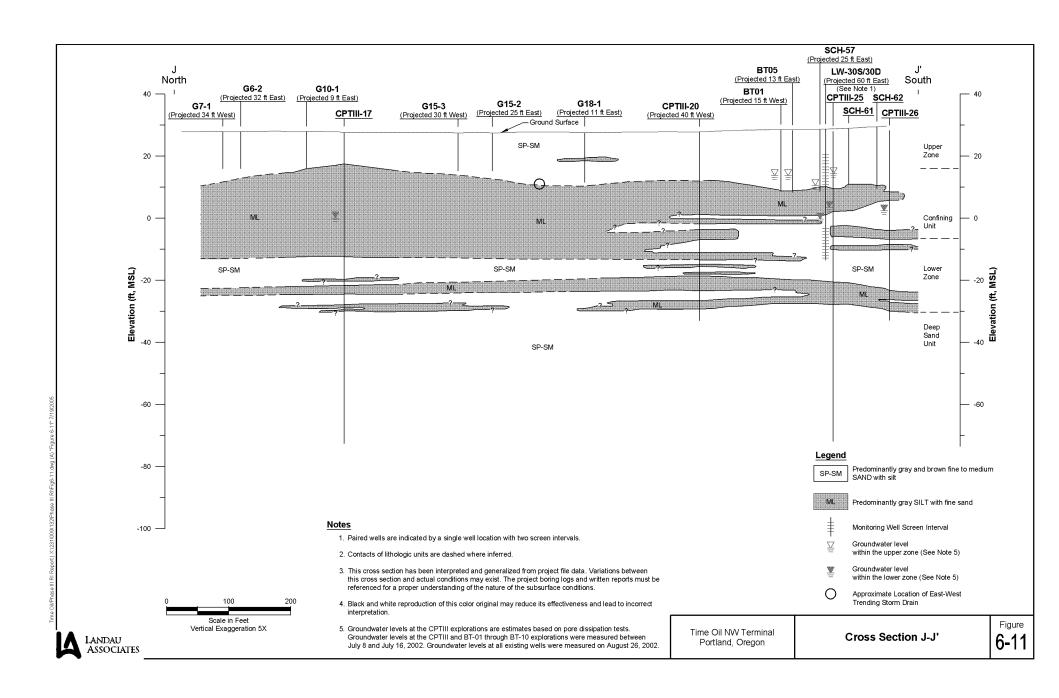


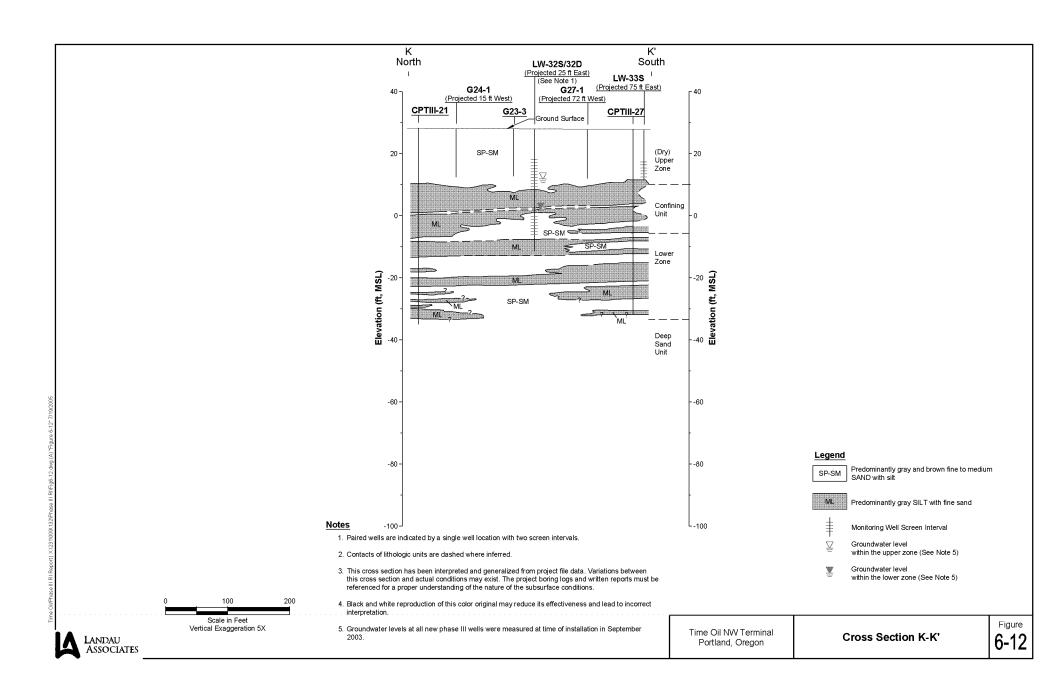


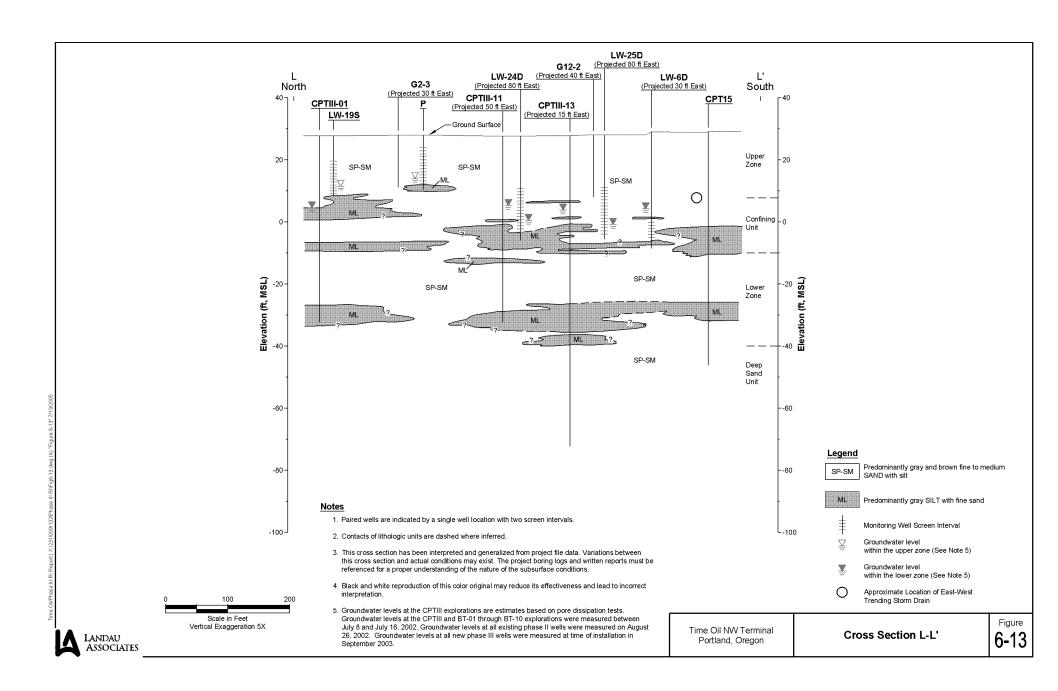


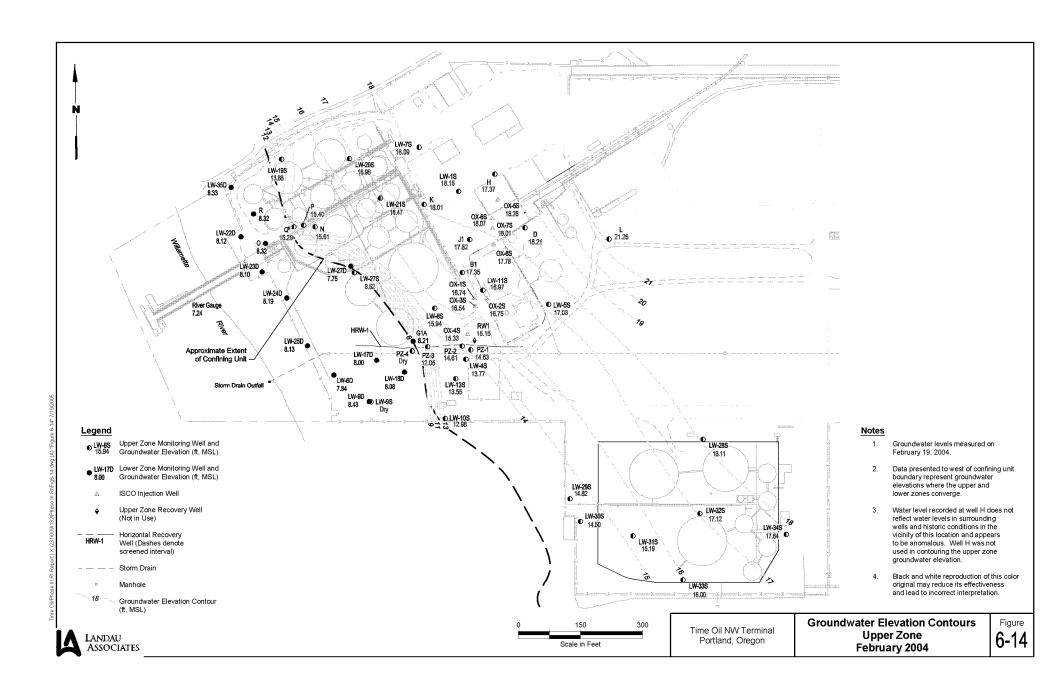


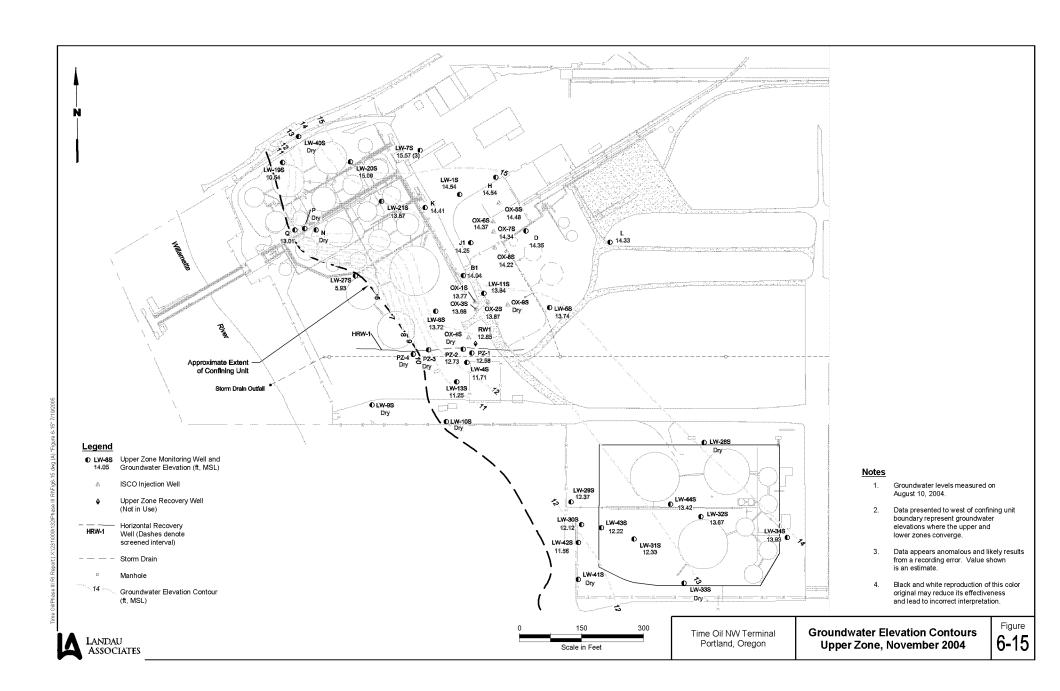


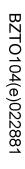


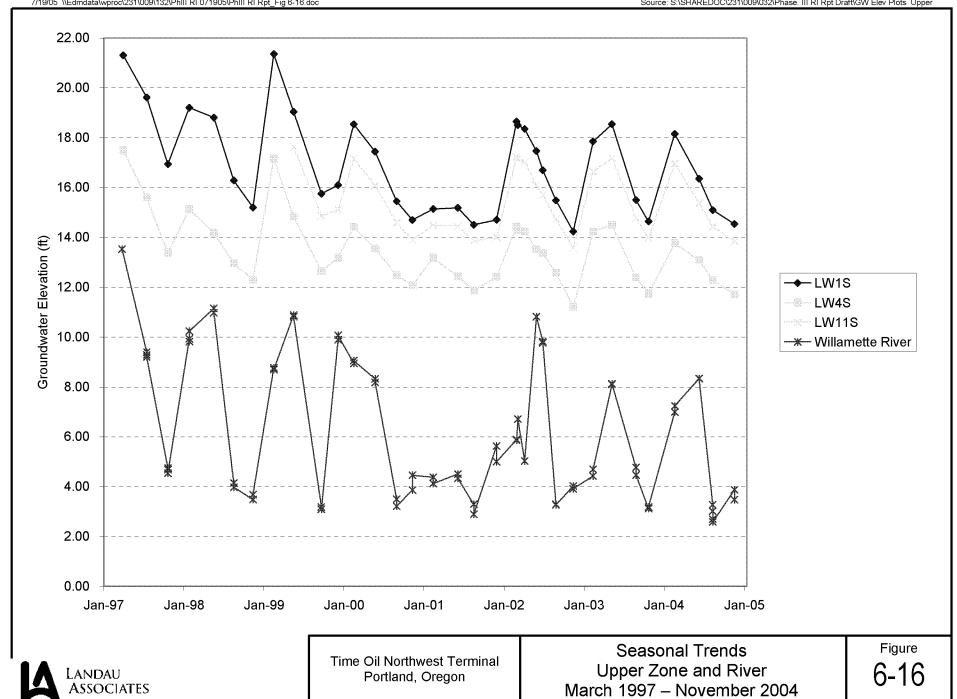


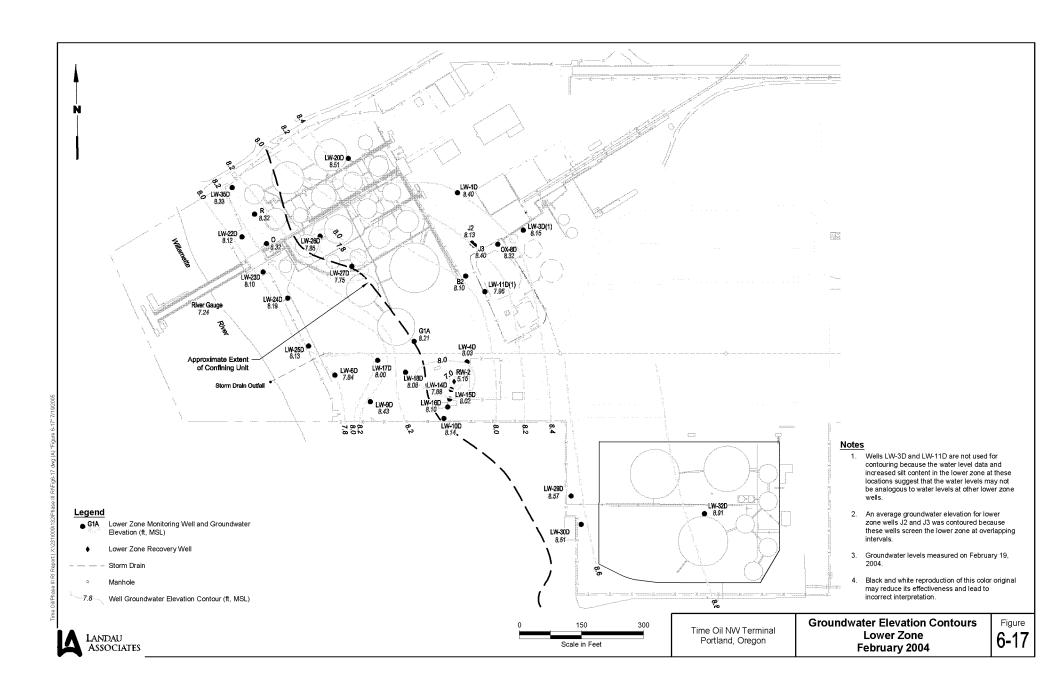


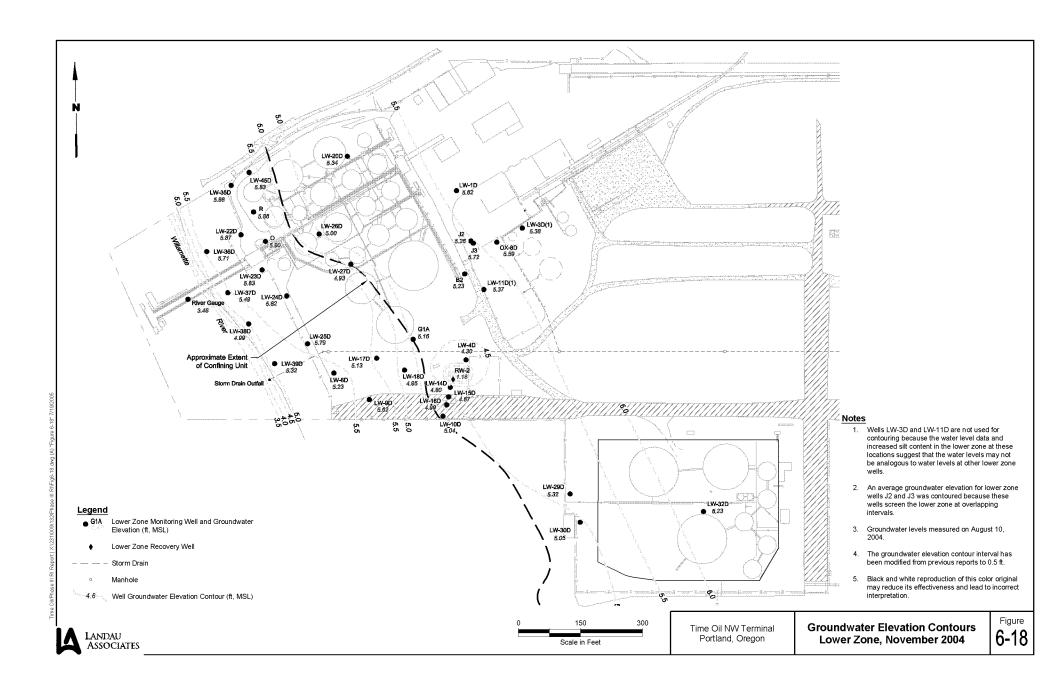




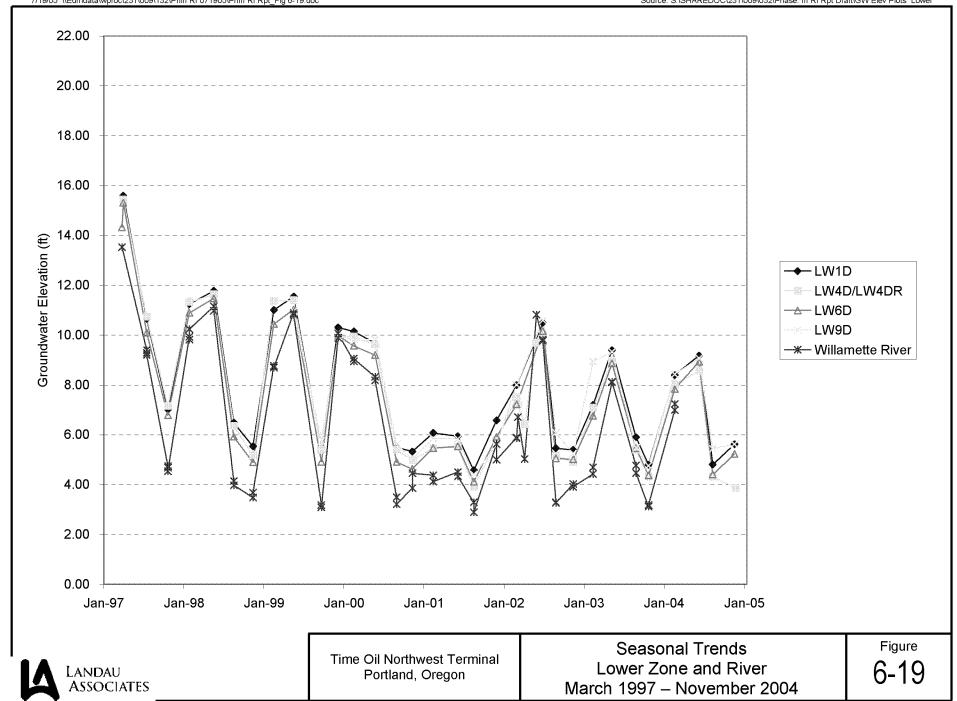










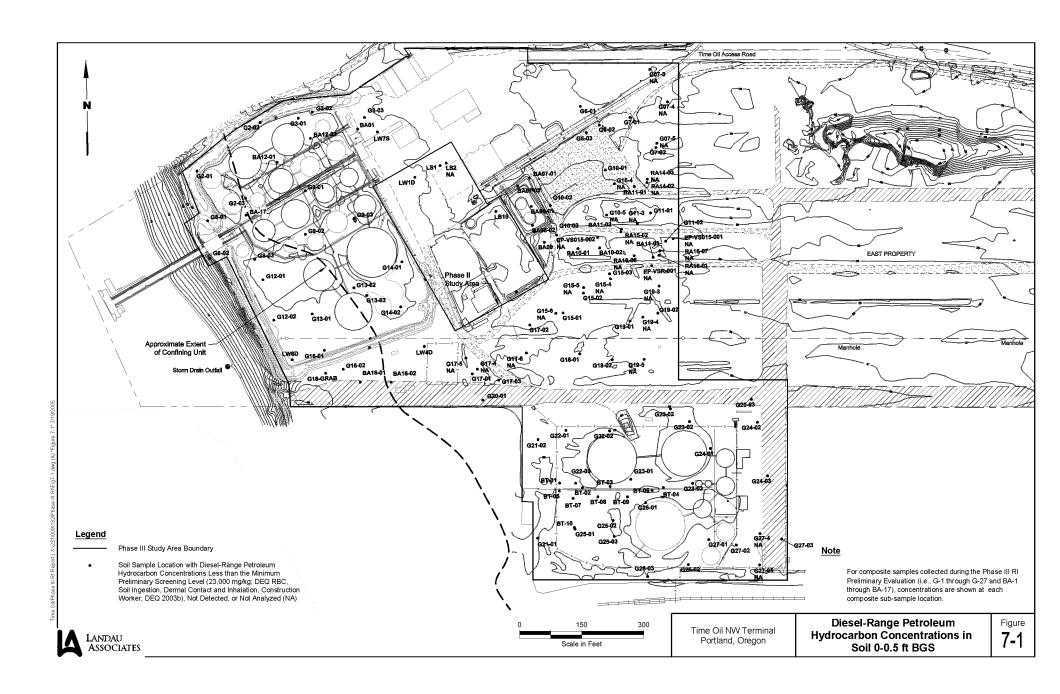


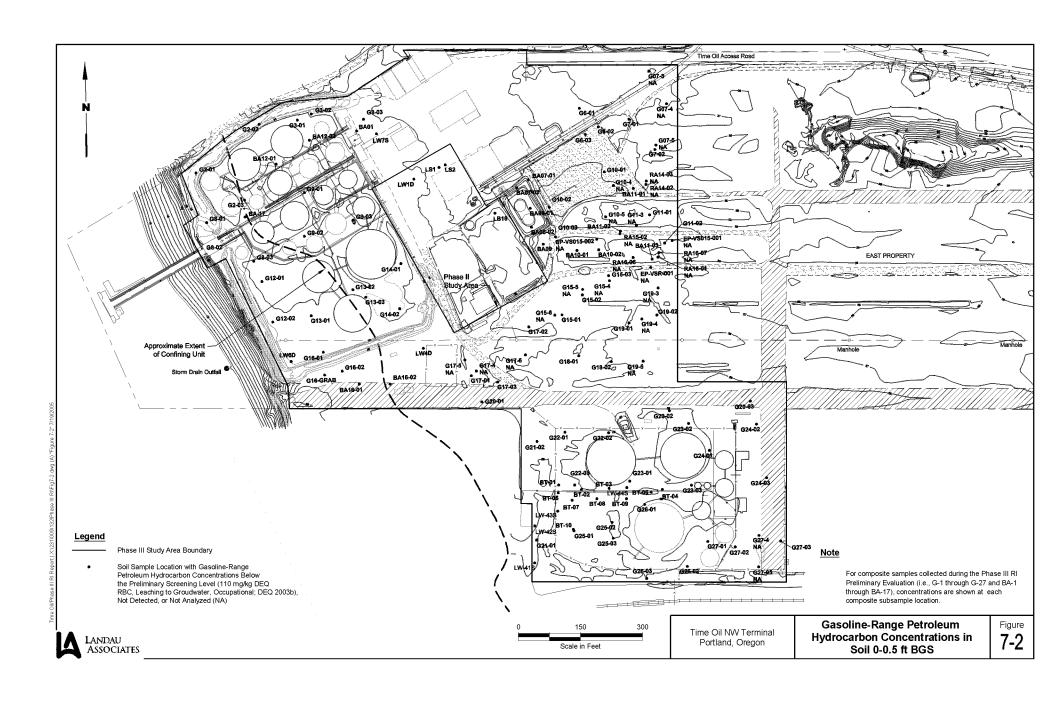


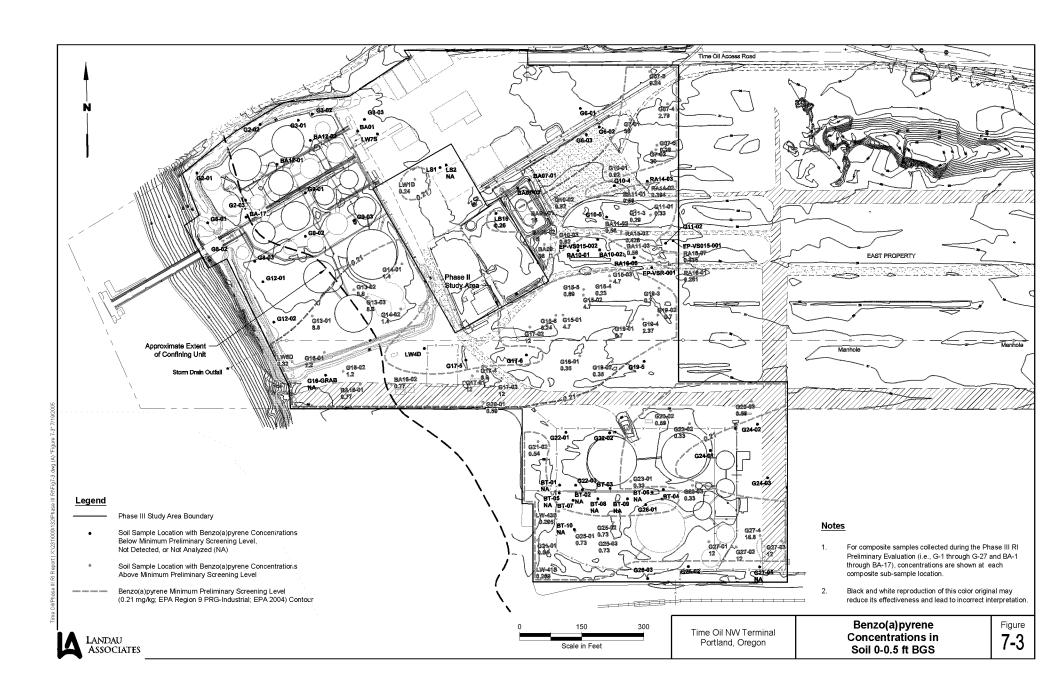
Time Oil NW Terminal Portland, Oregon

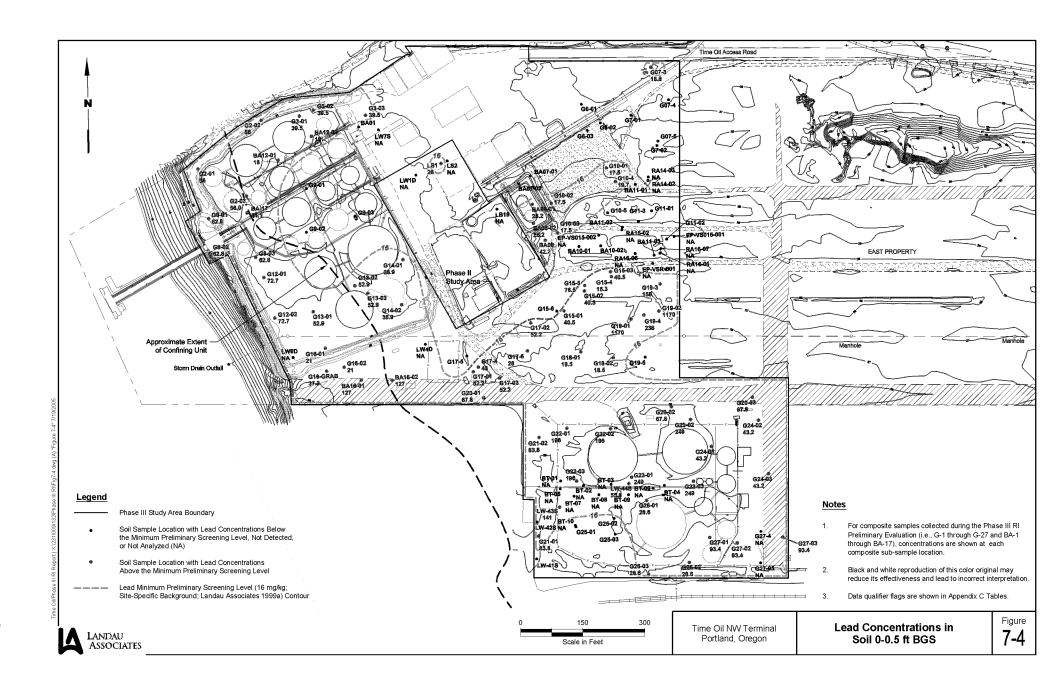
**Groundwater Vertical Gradients** 

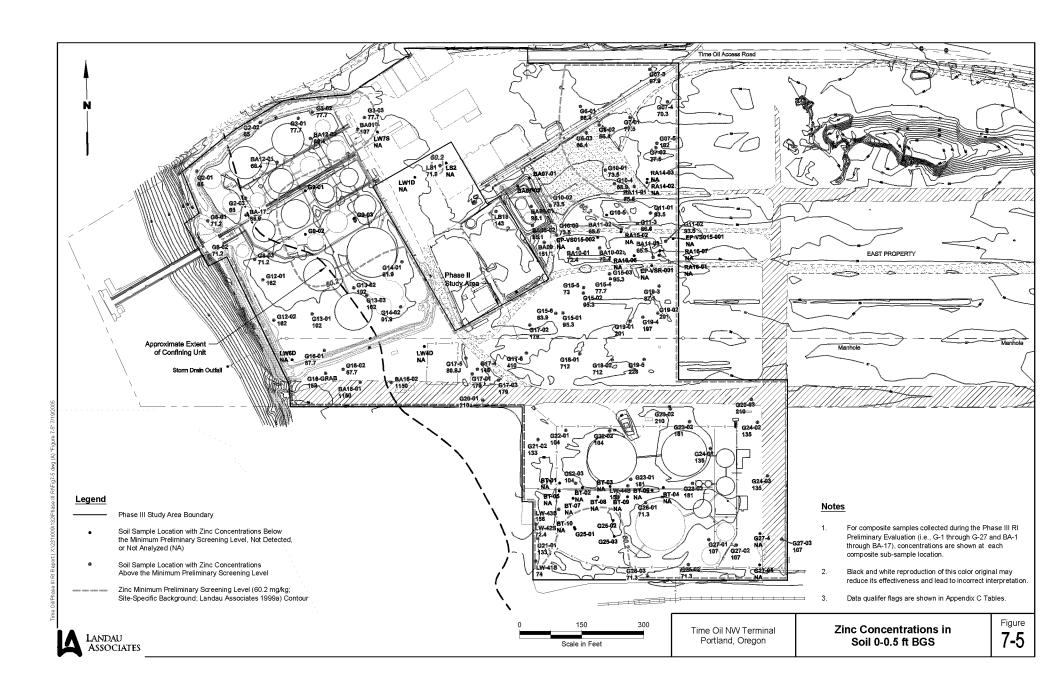
Figure 6-20

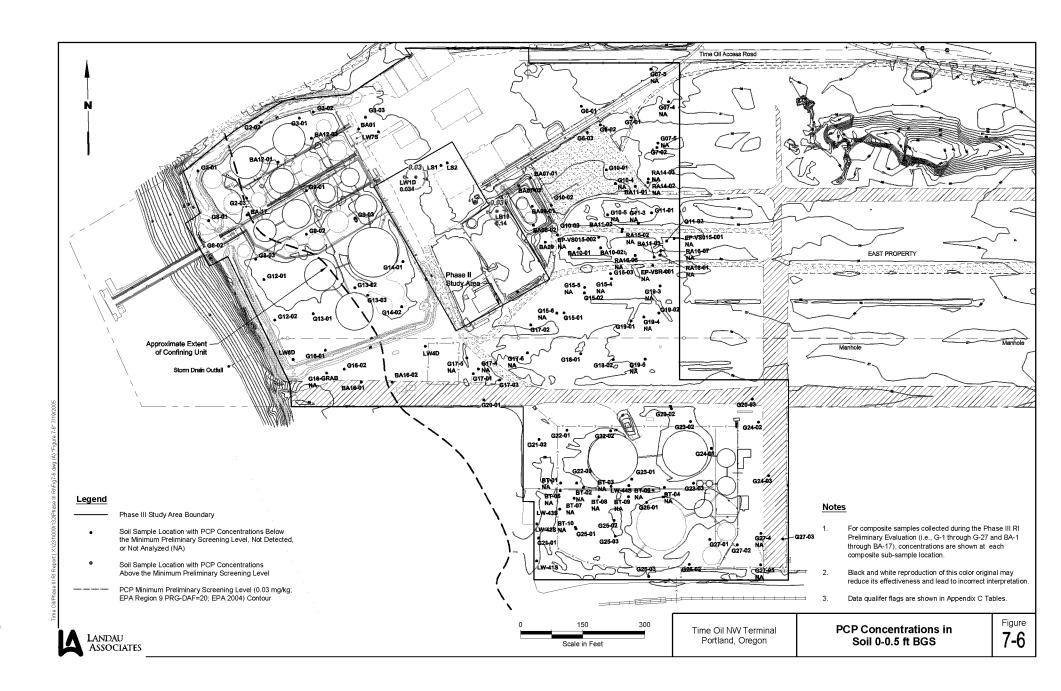


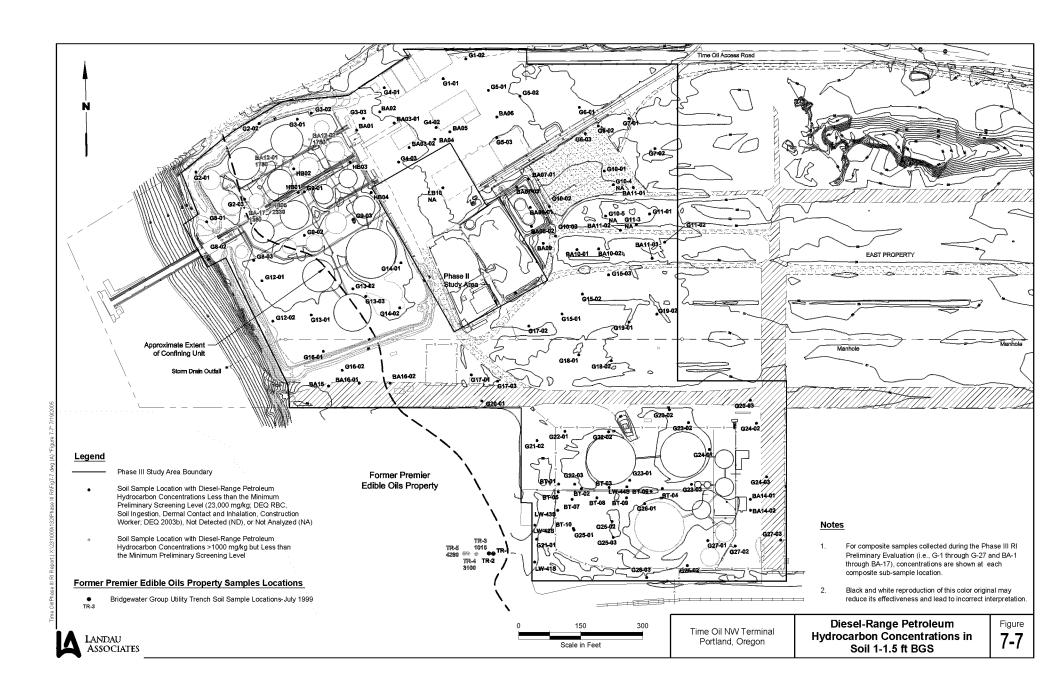


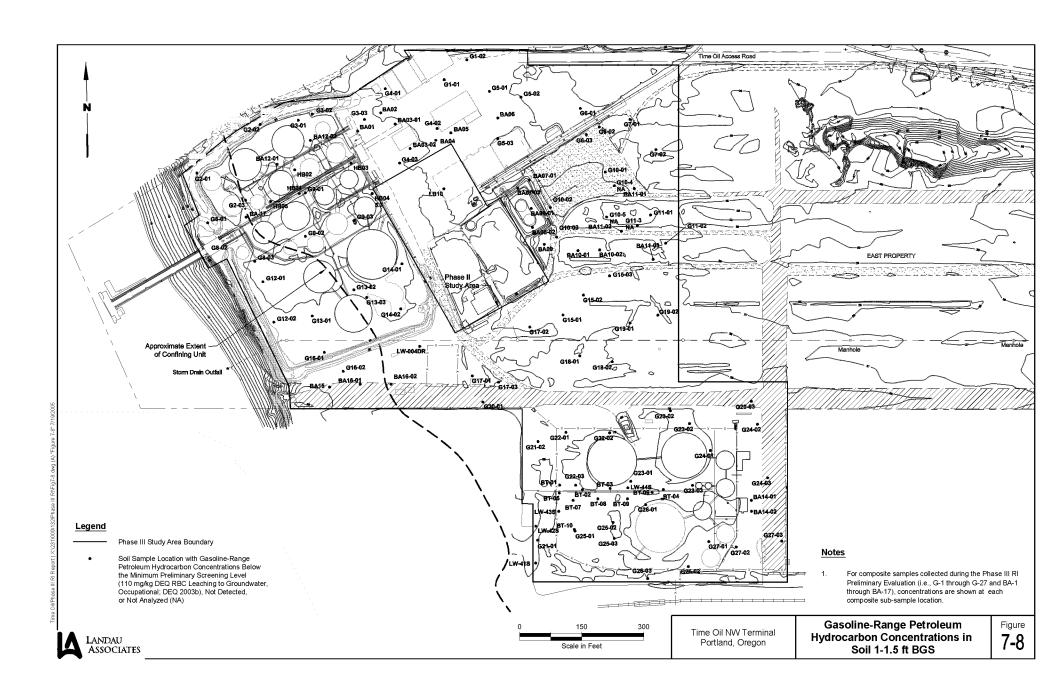


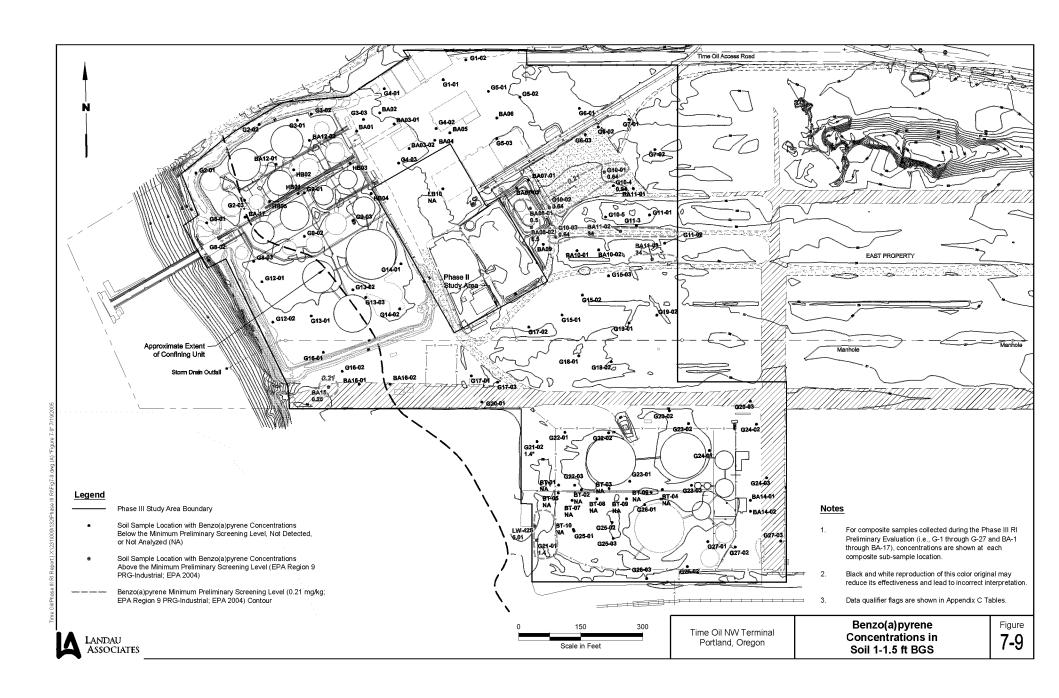


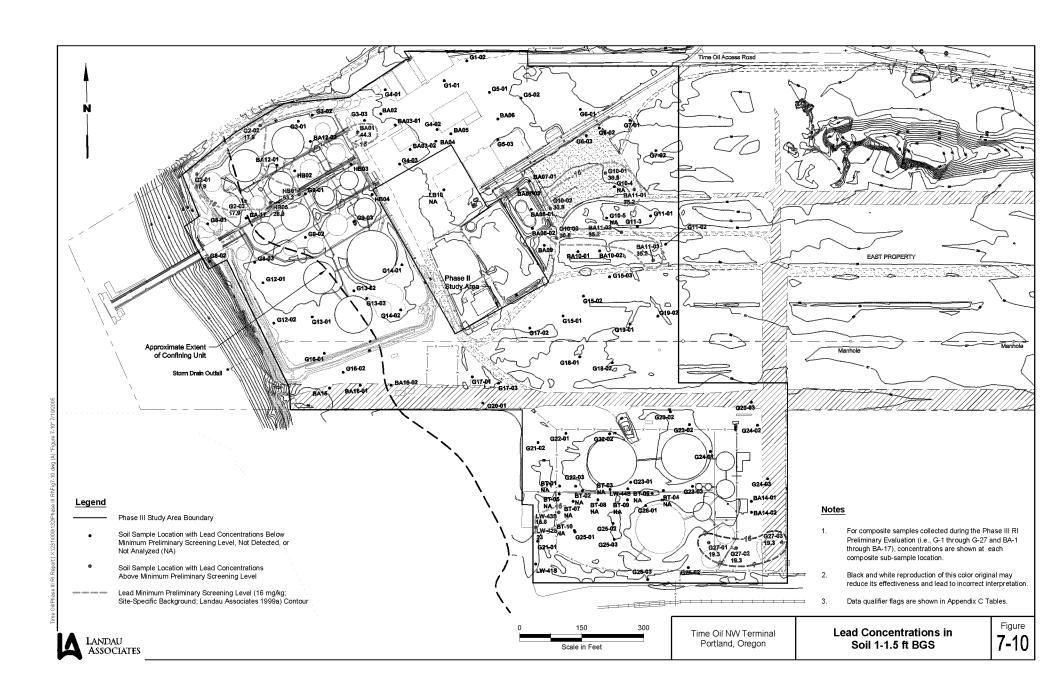


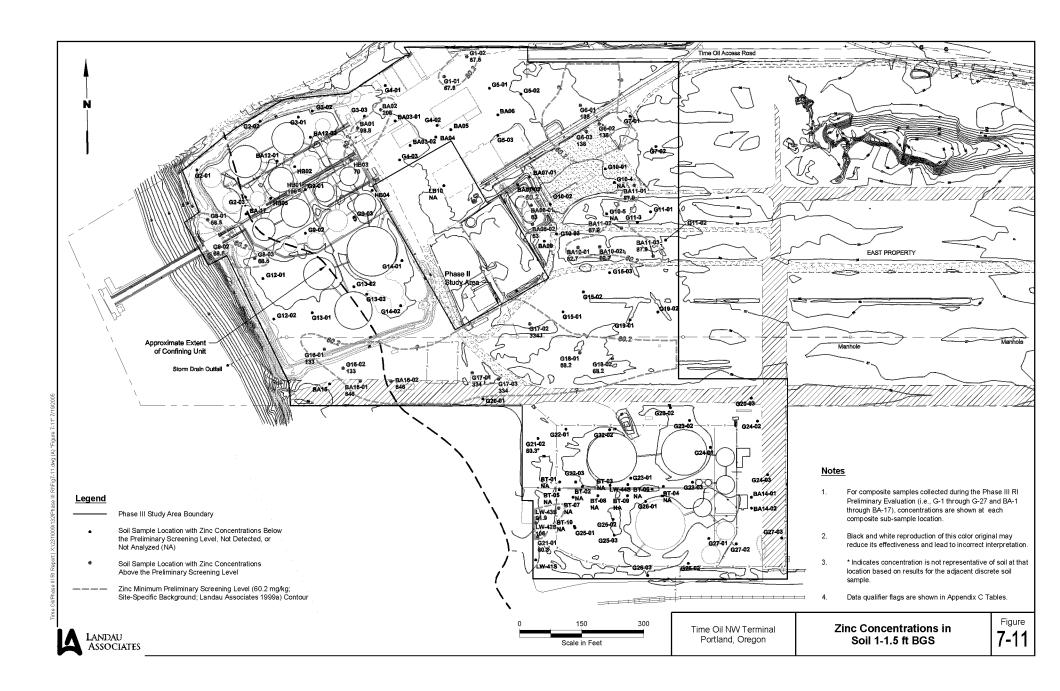


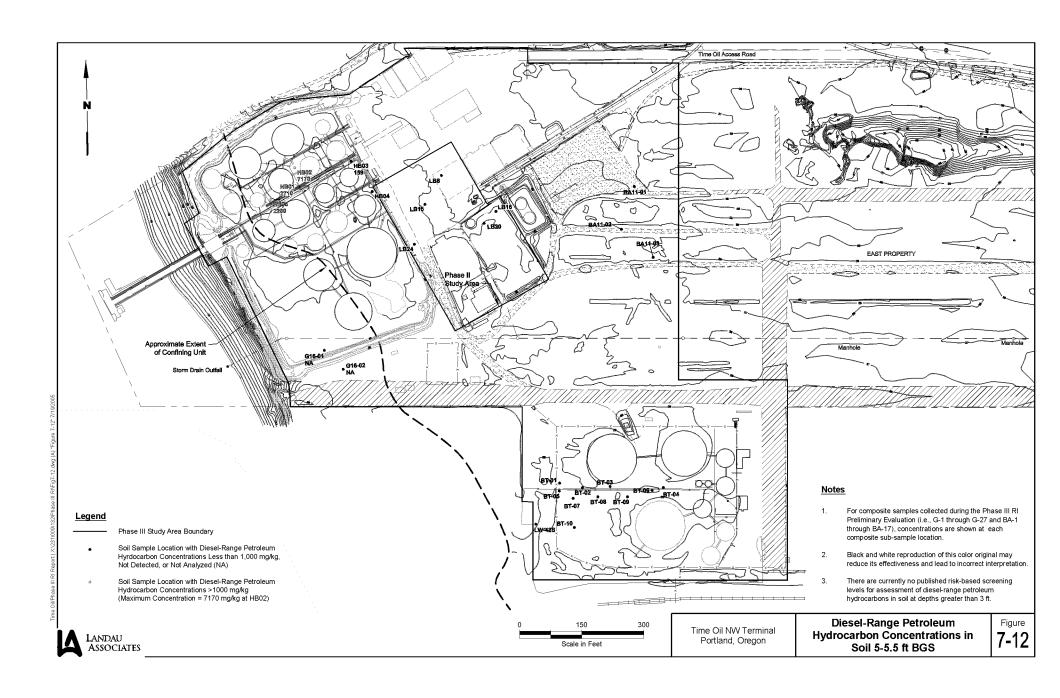


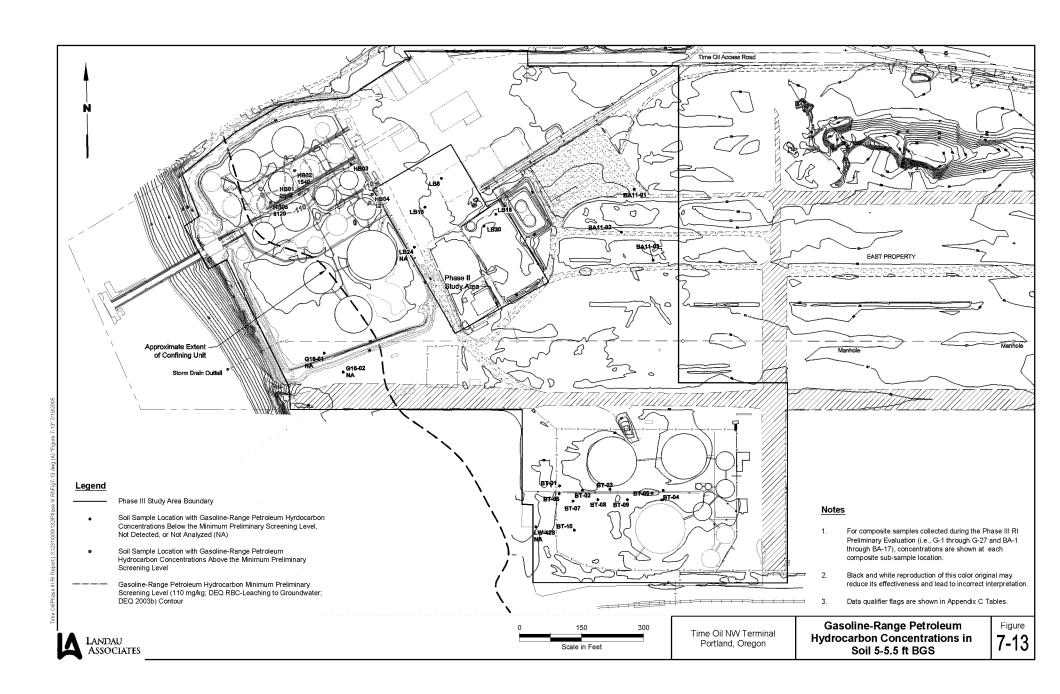


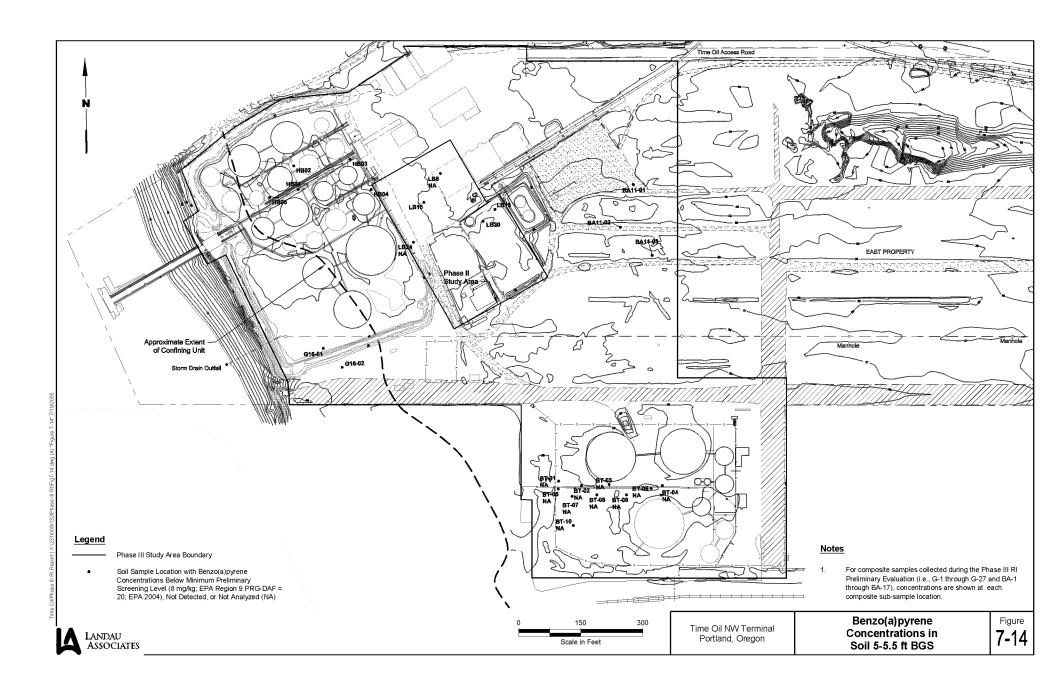


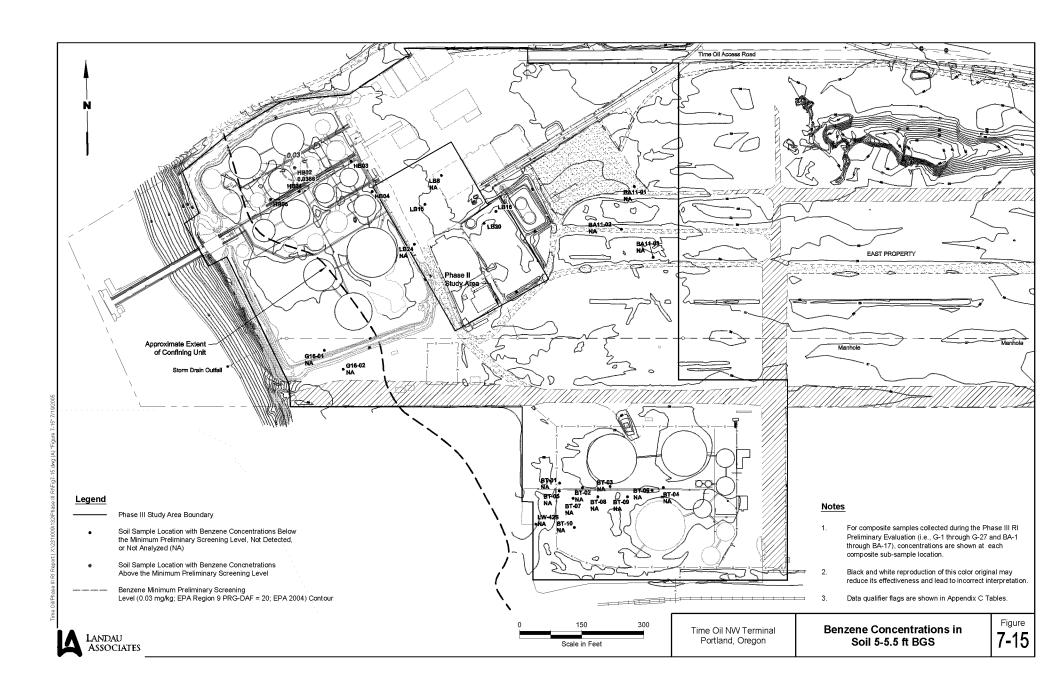


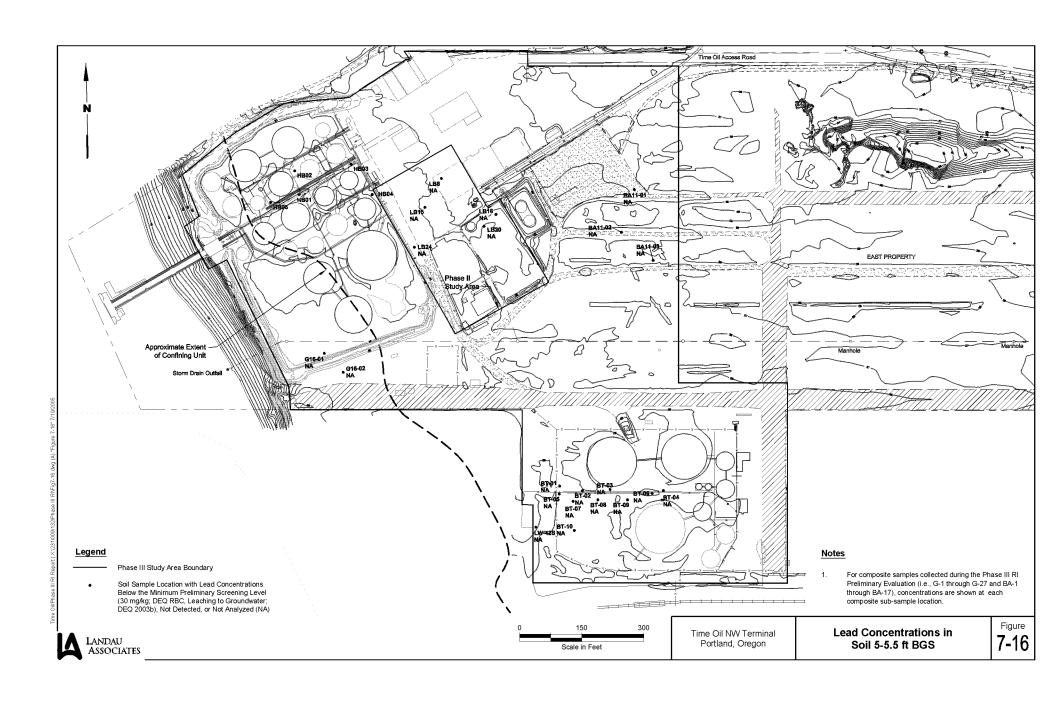


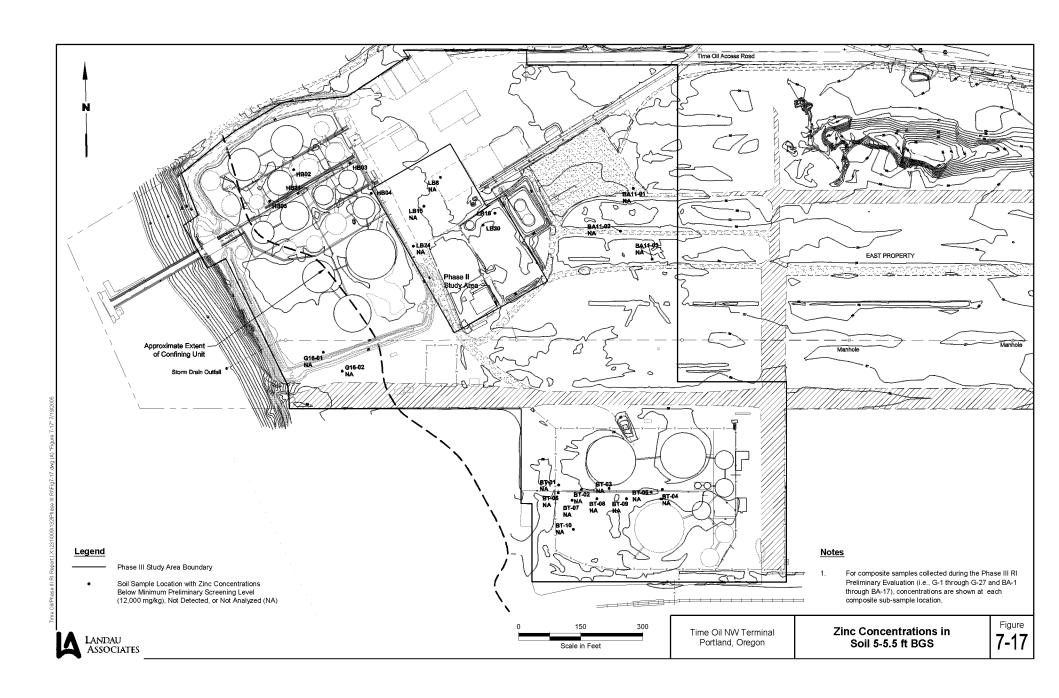


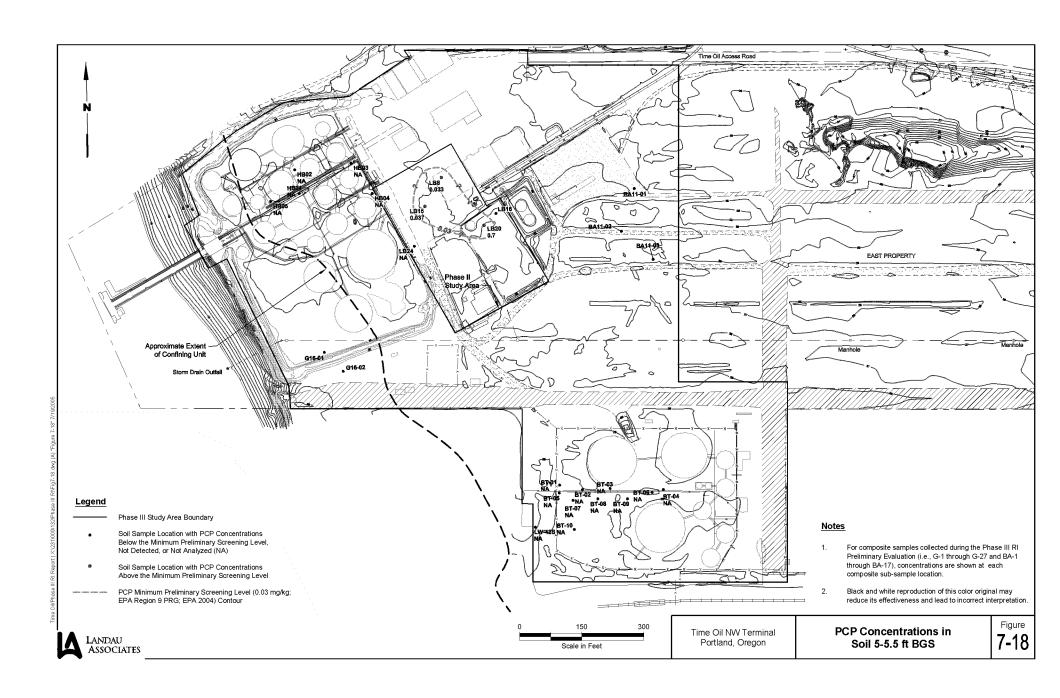


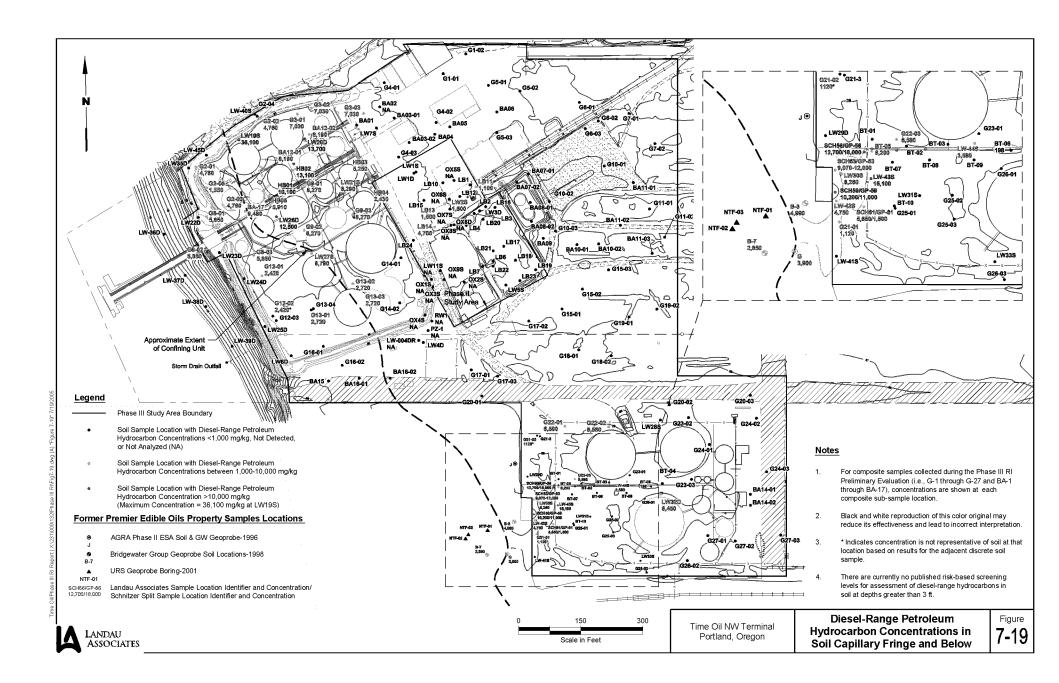


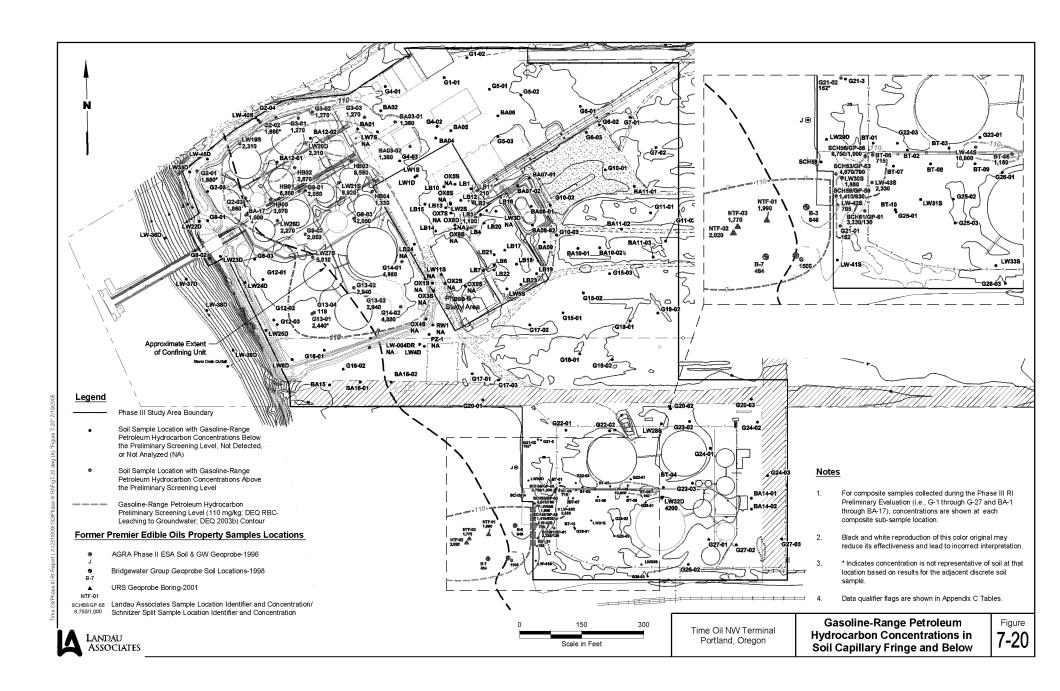


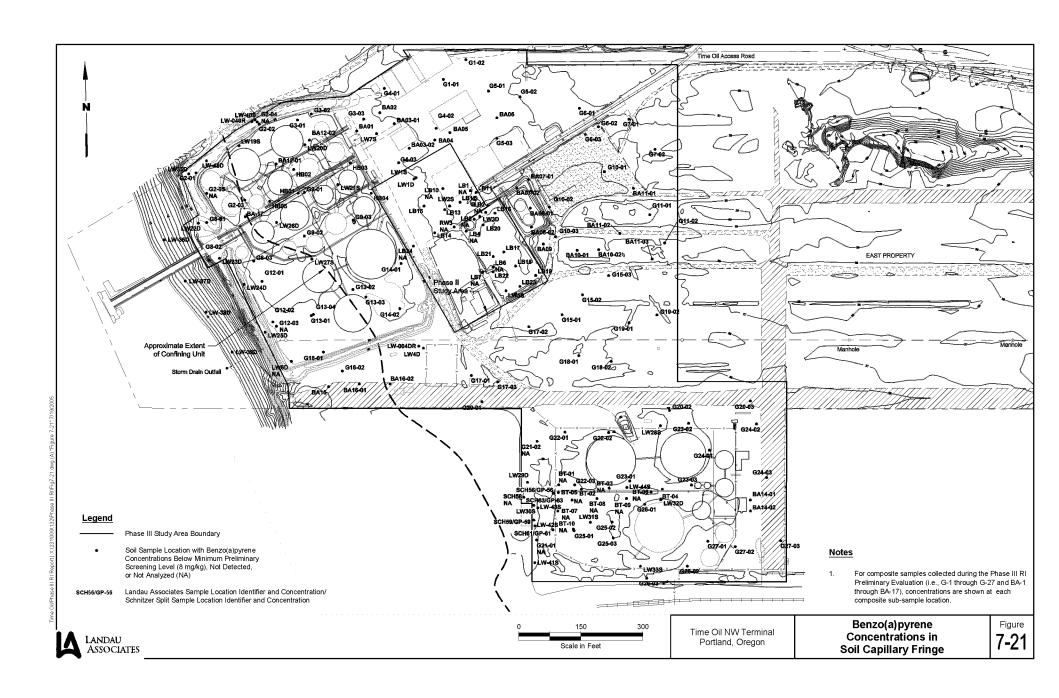


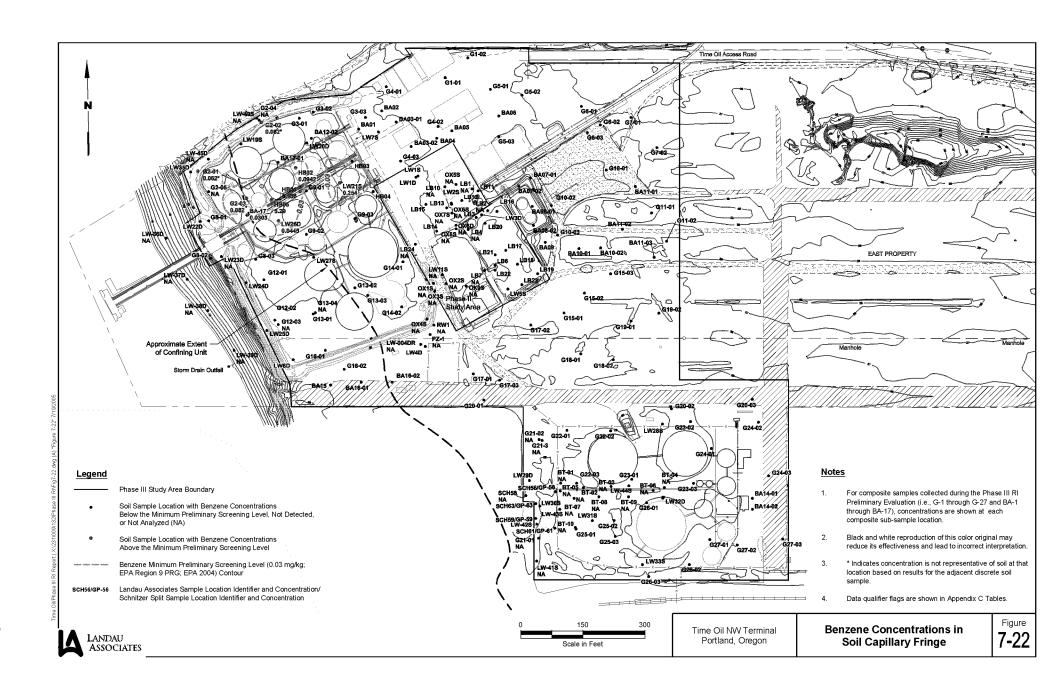


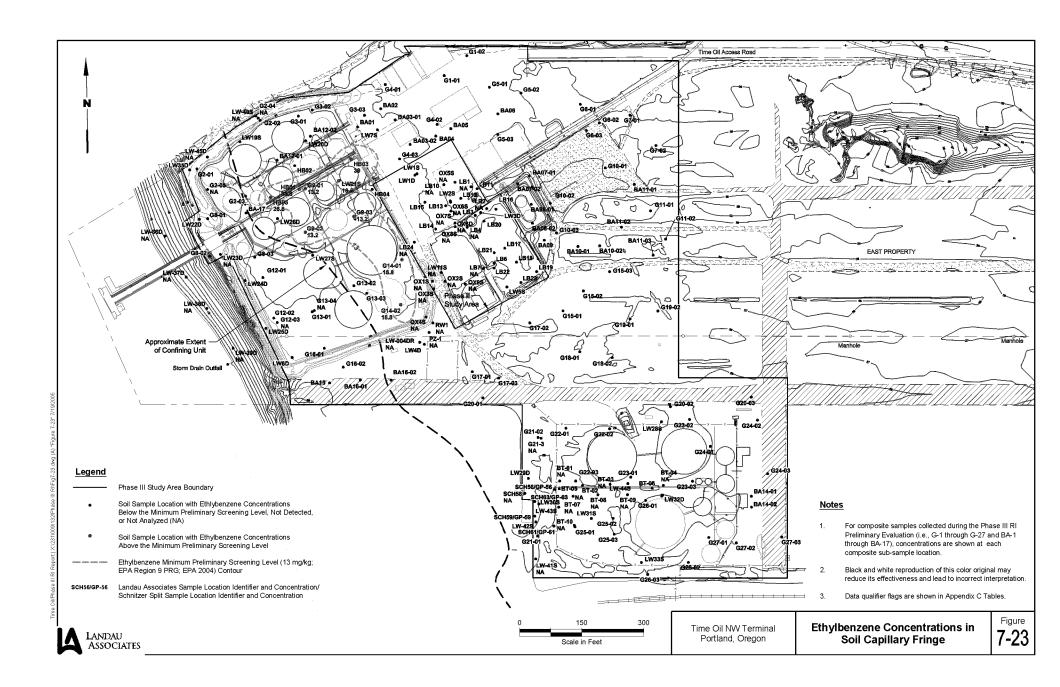


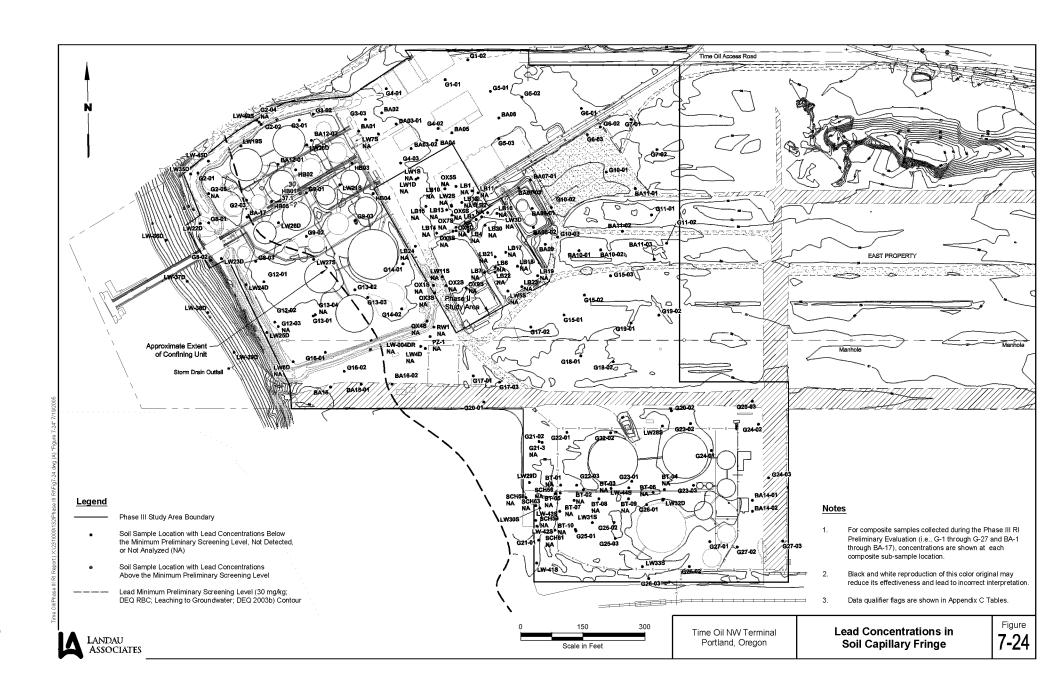


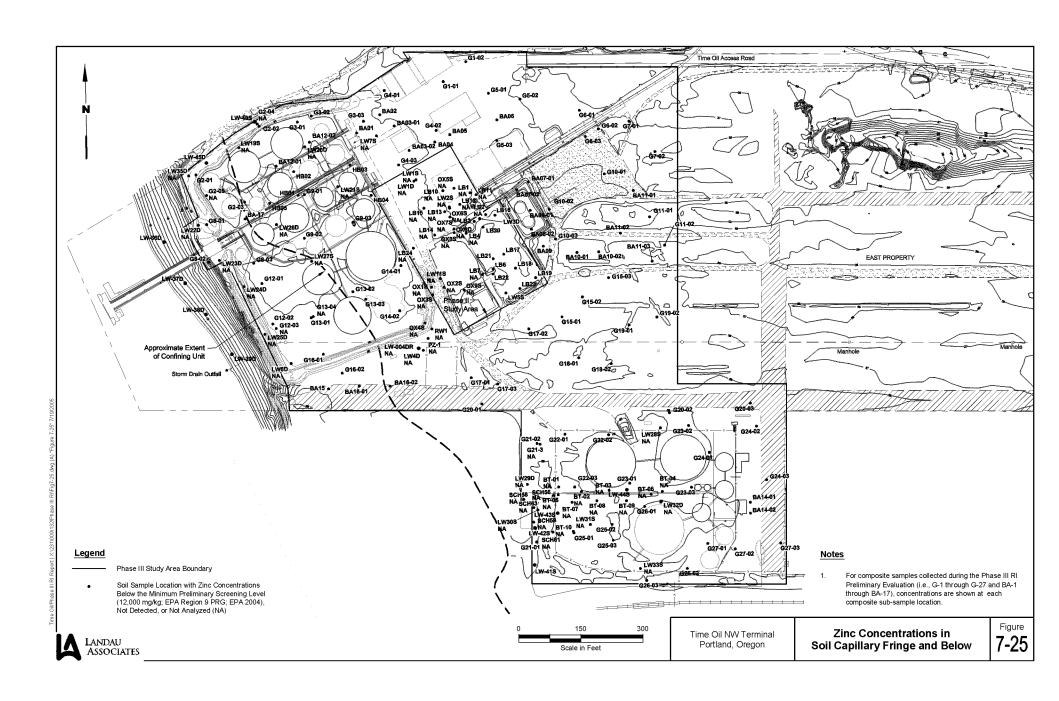


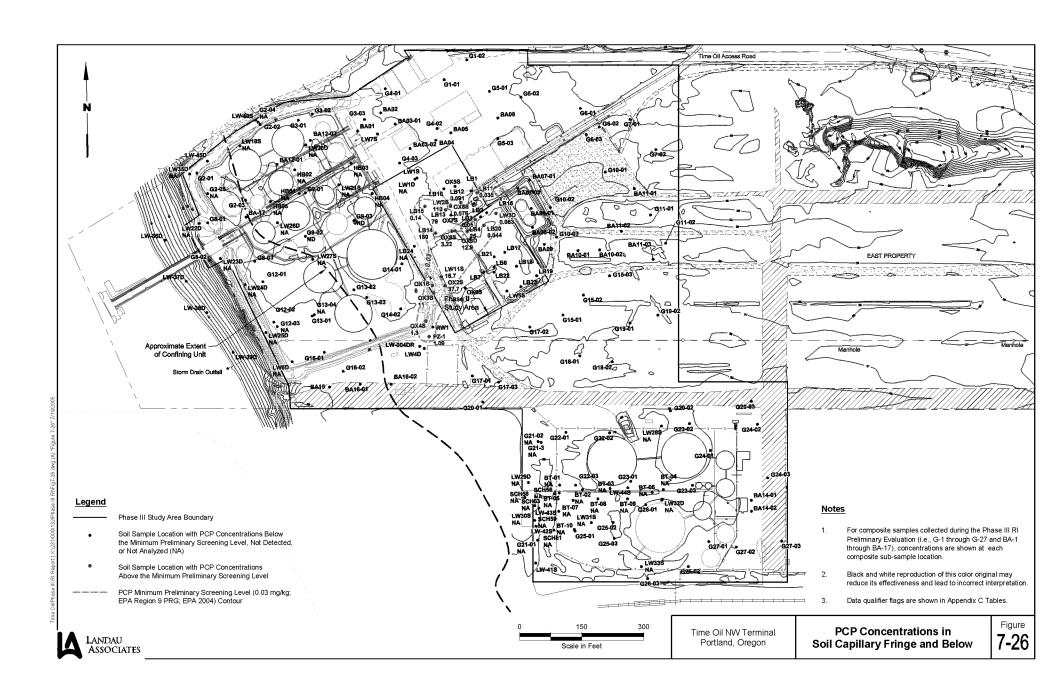


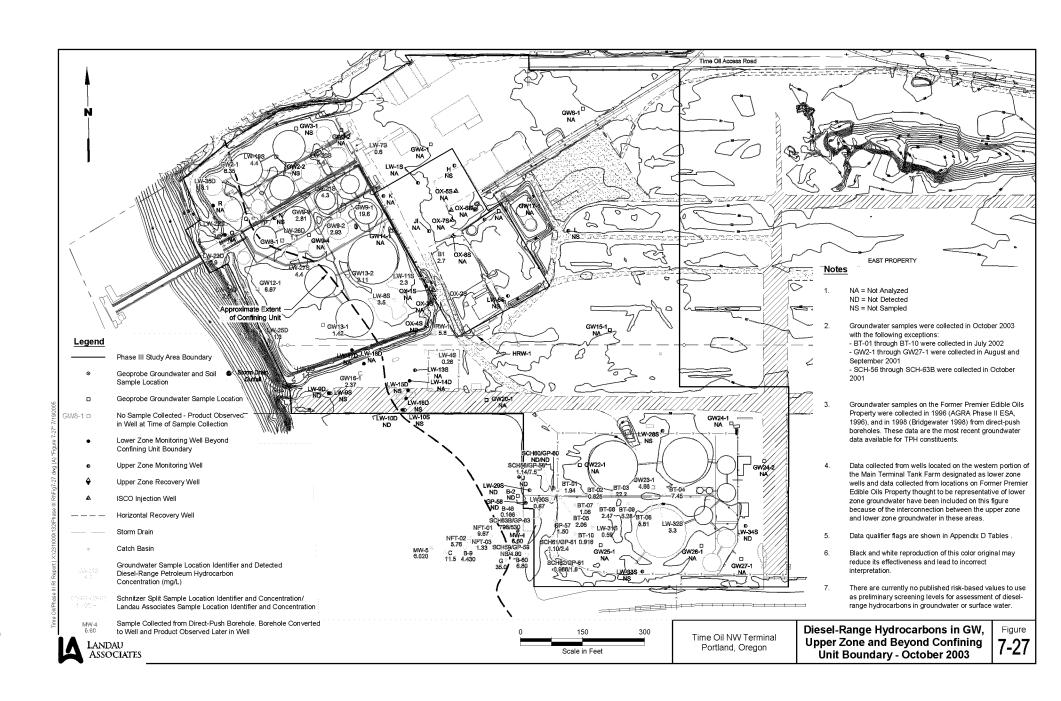


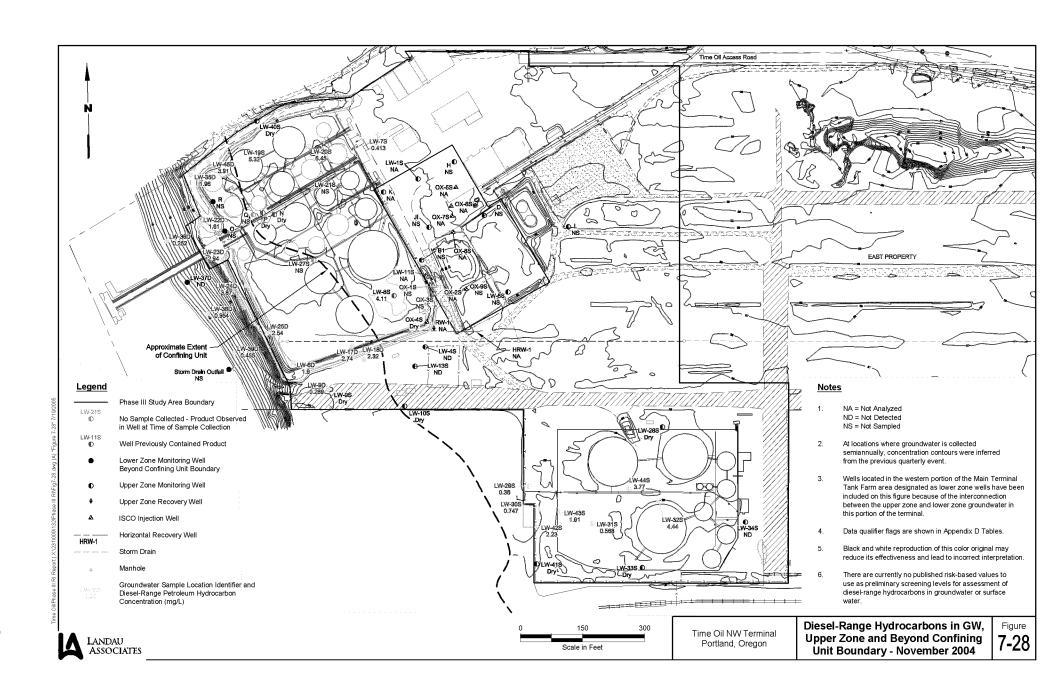


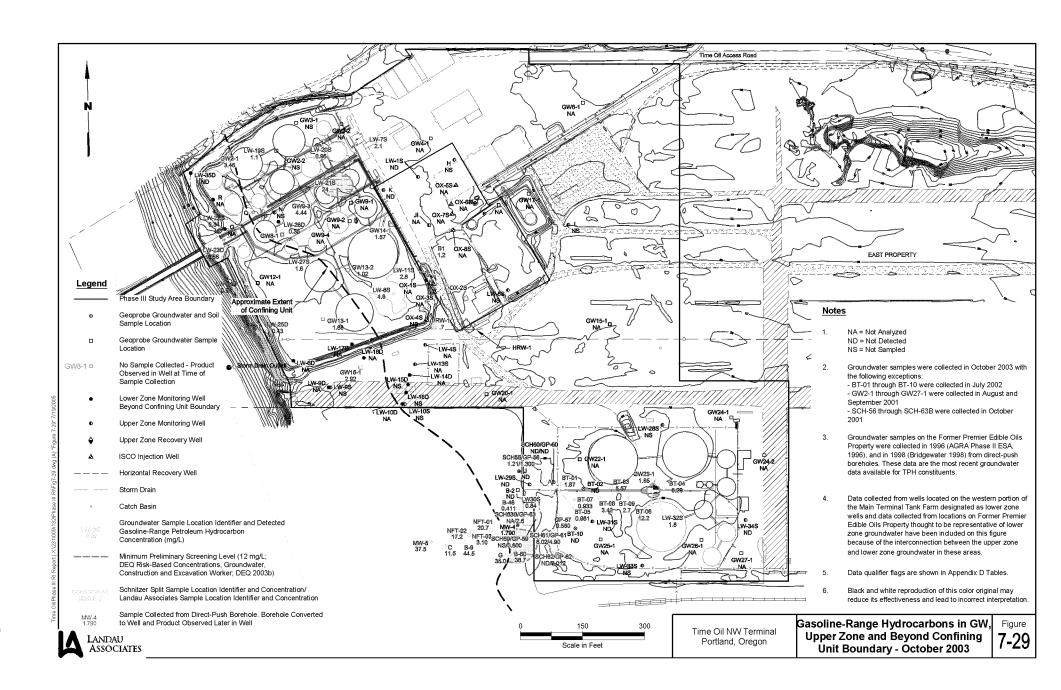


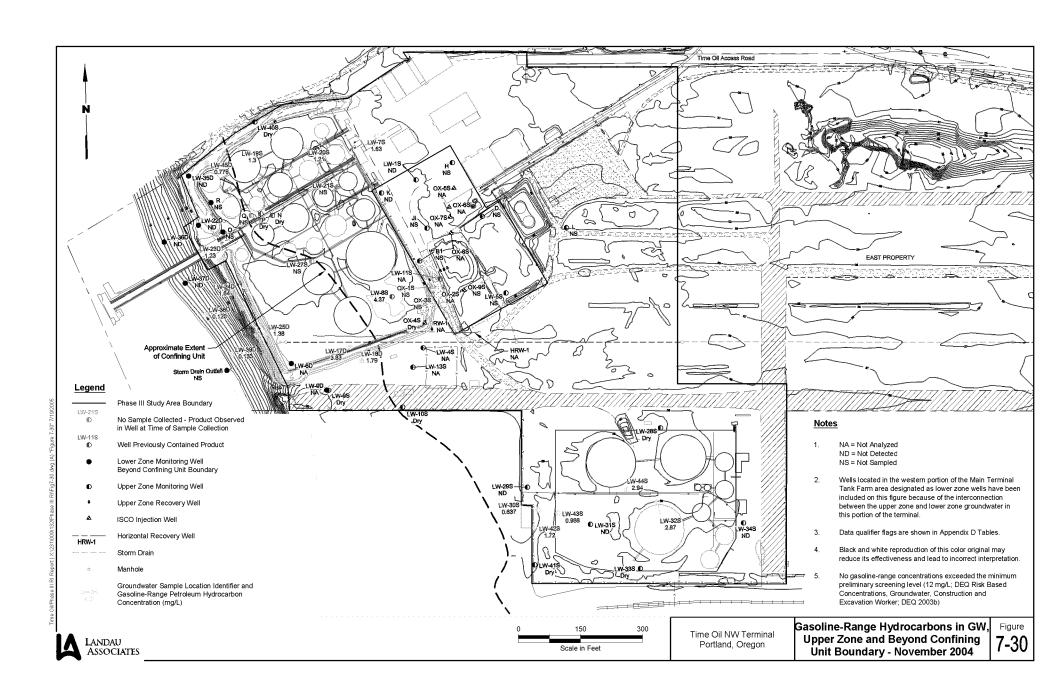


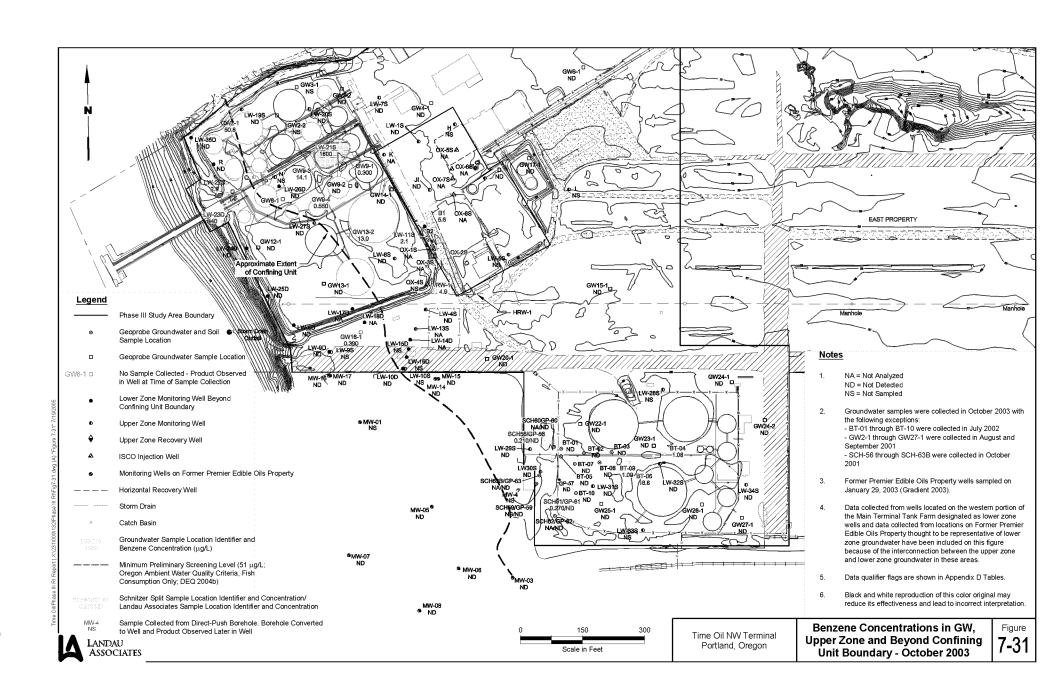


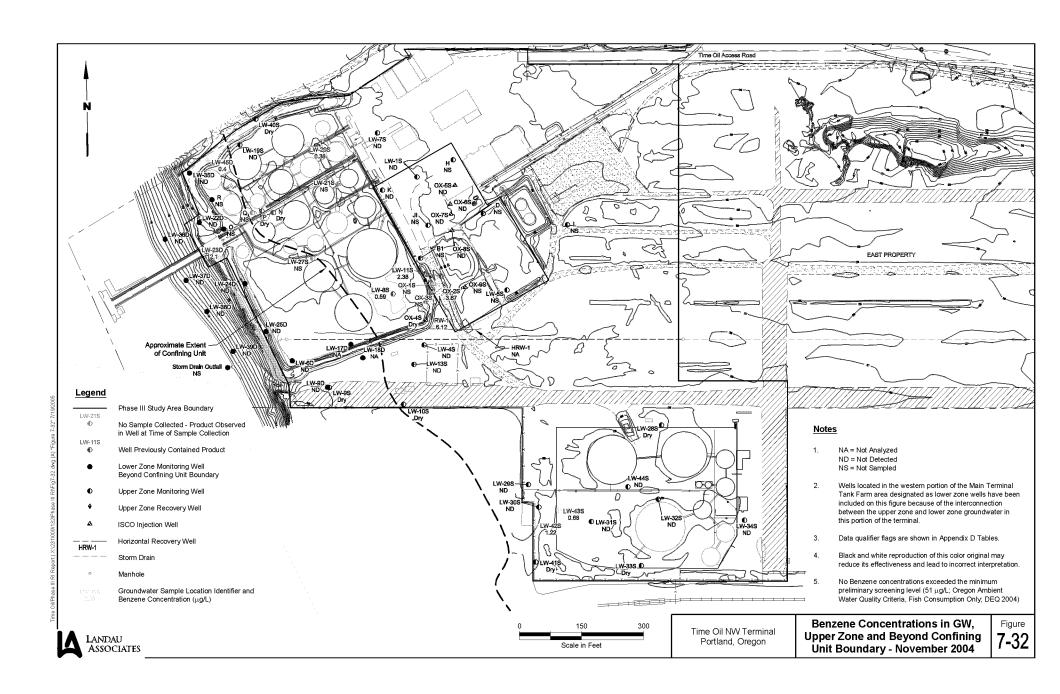


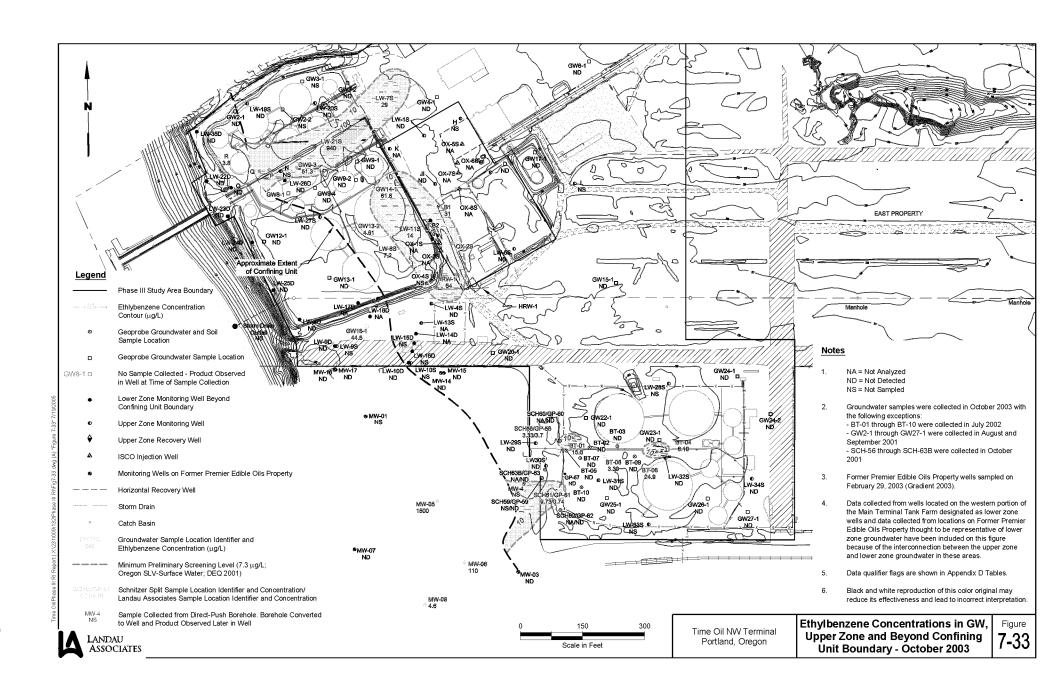


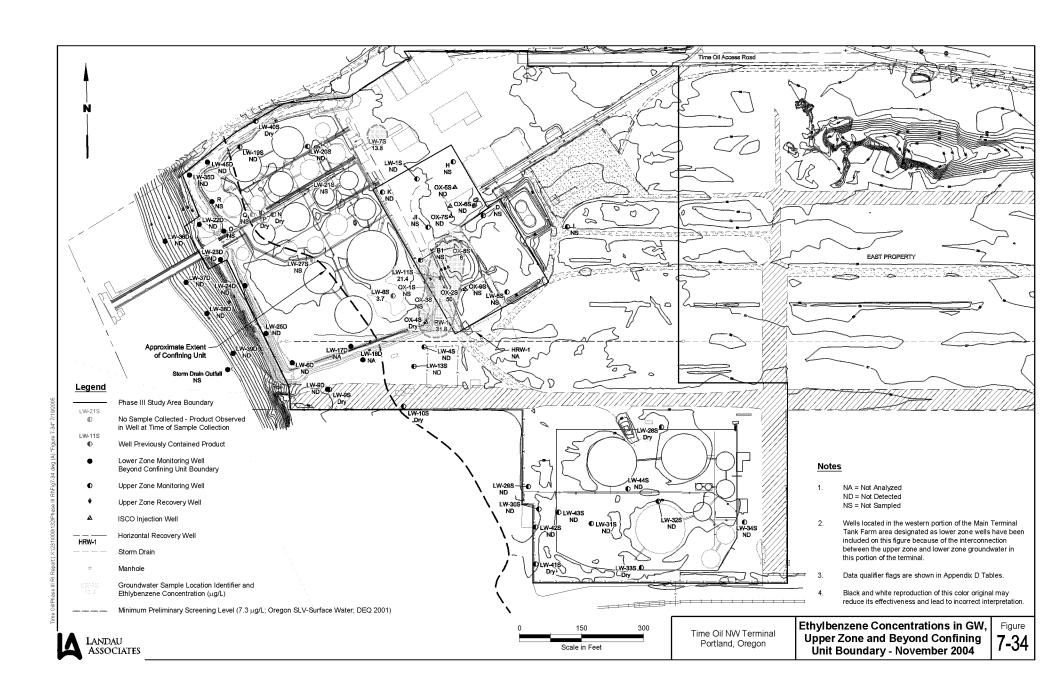


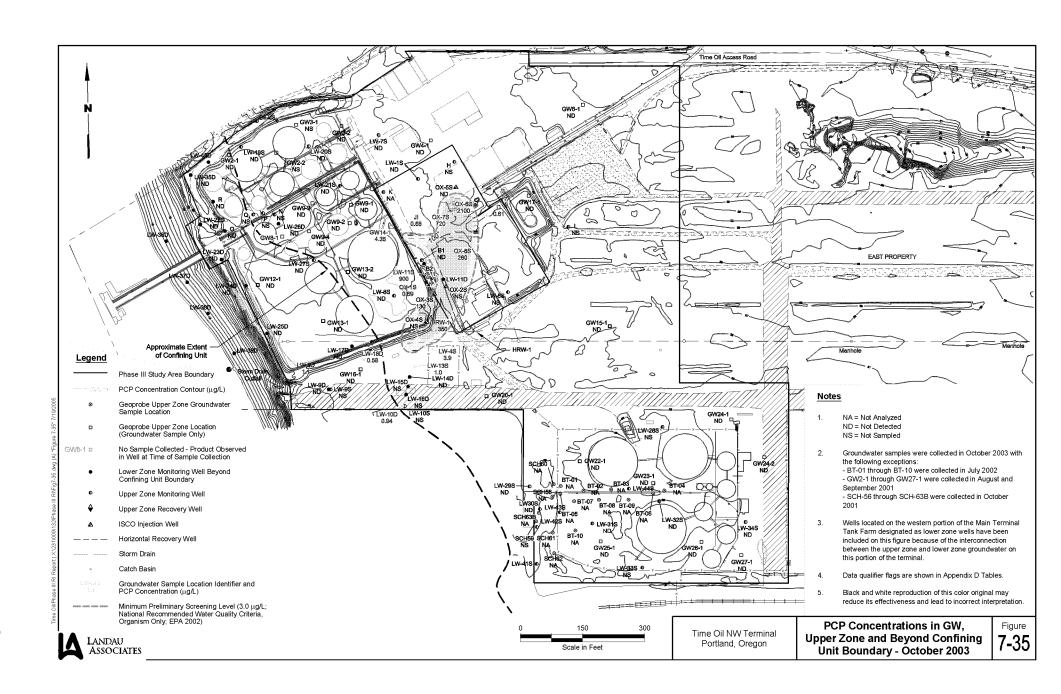


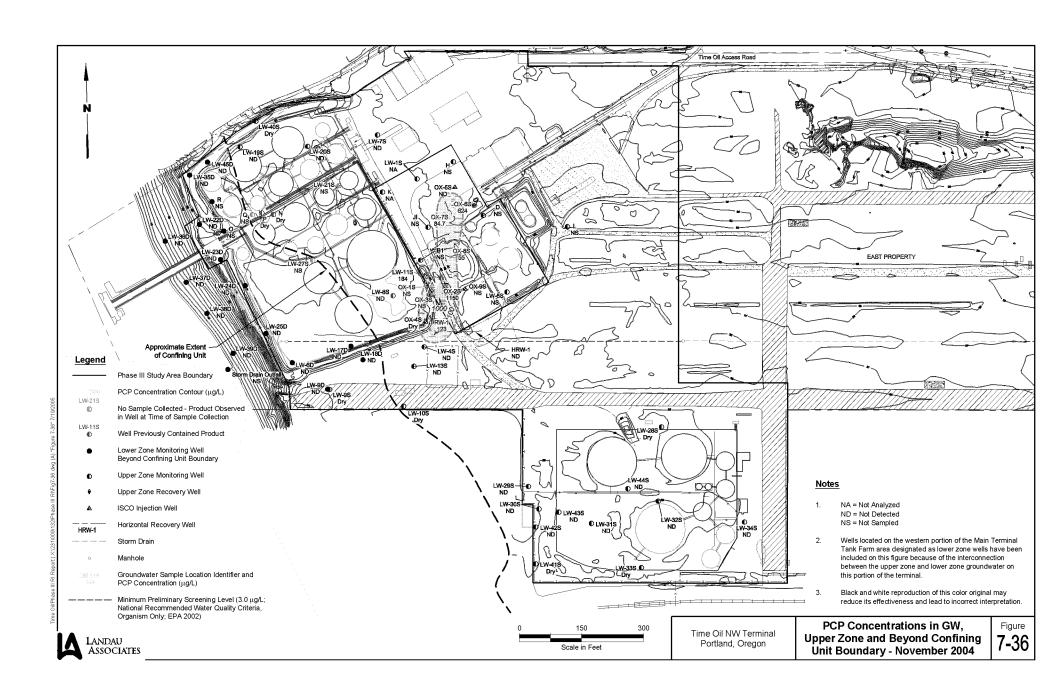


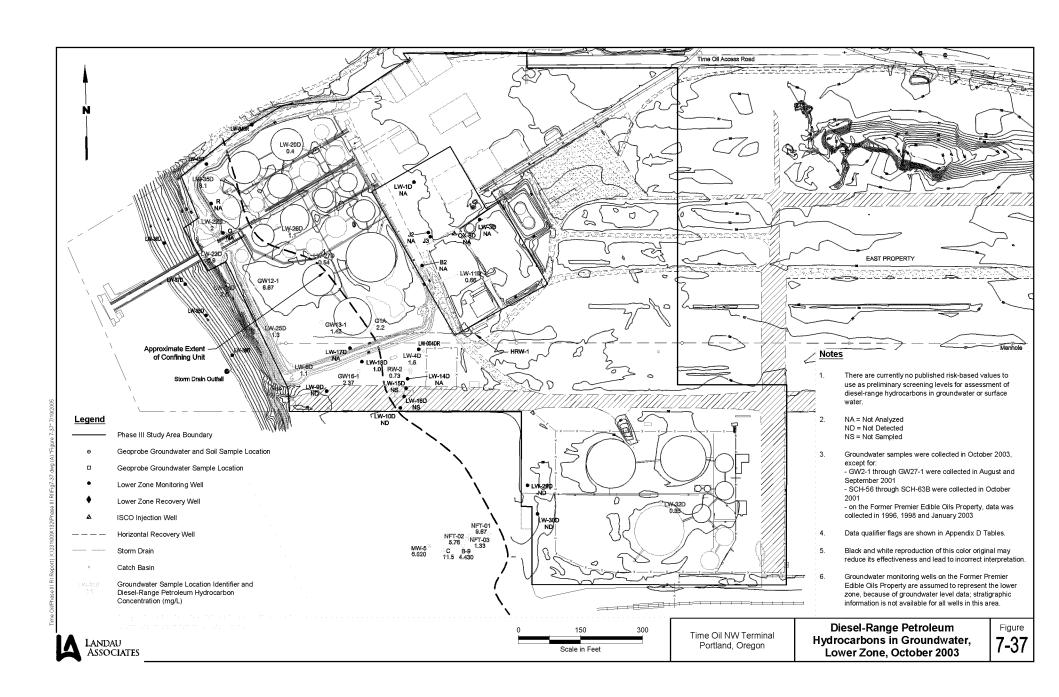


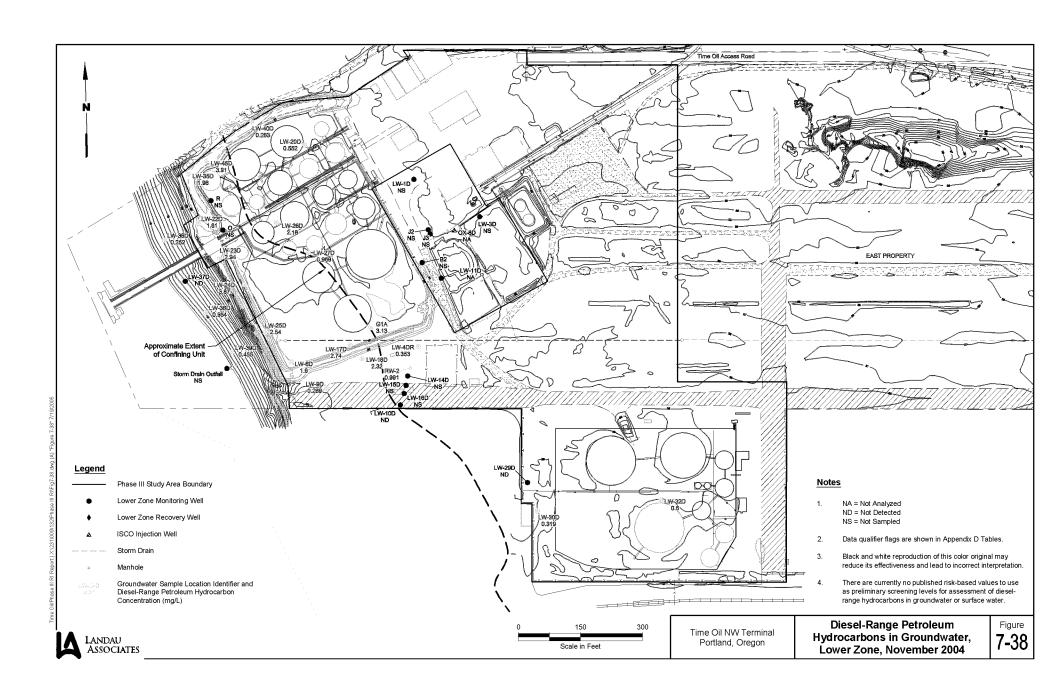


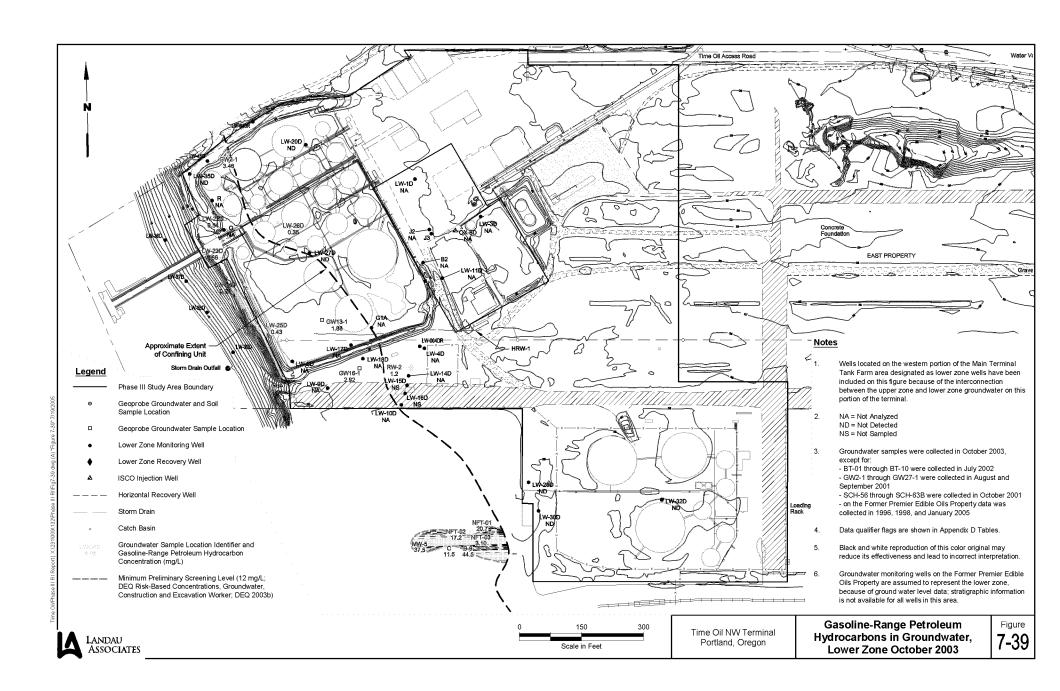


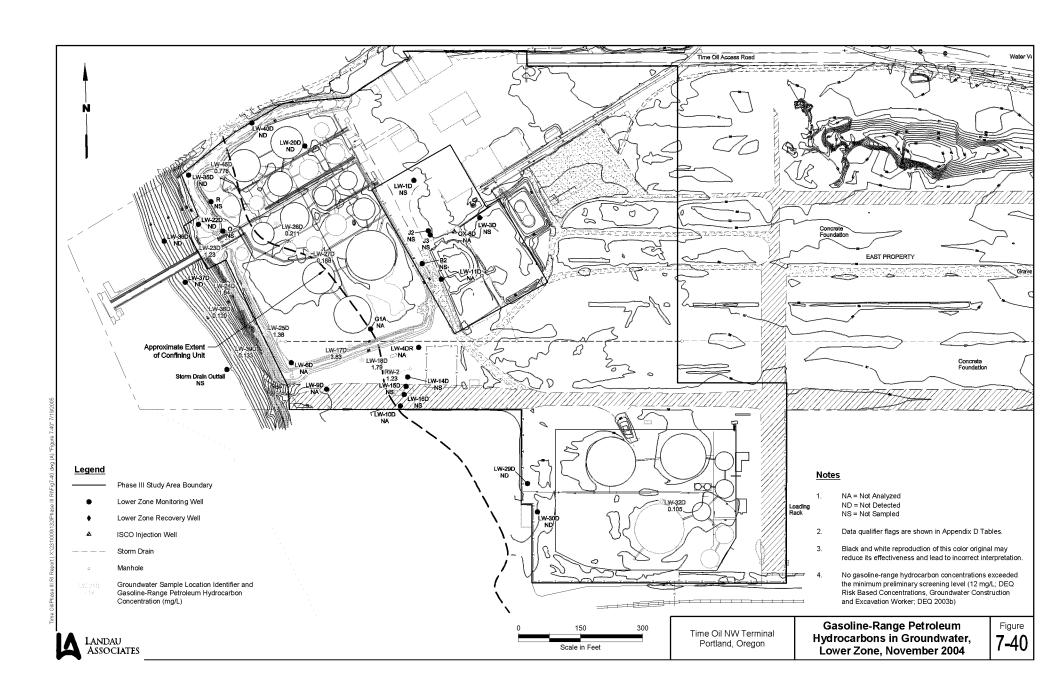


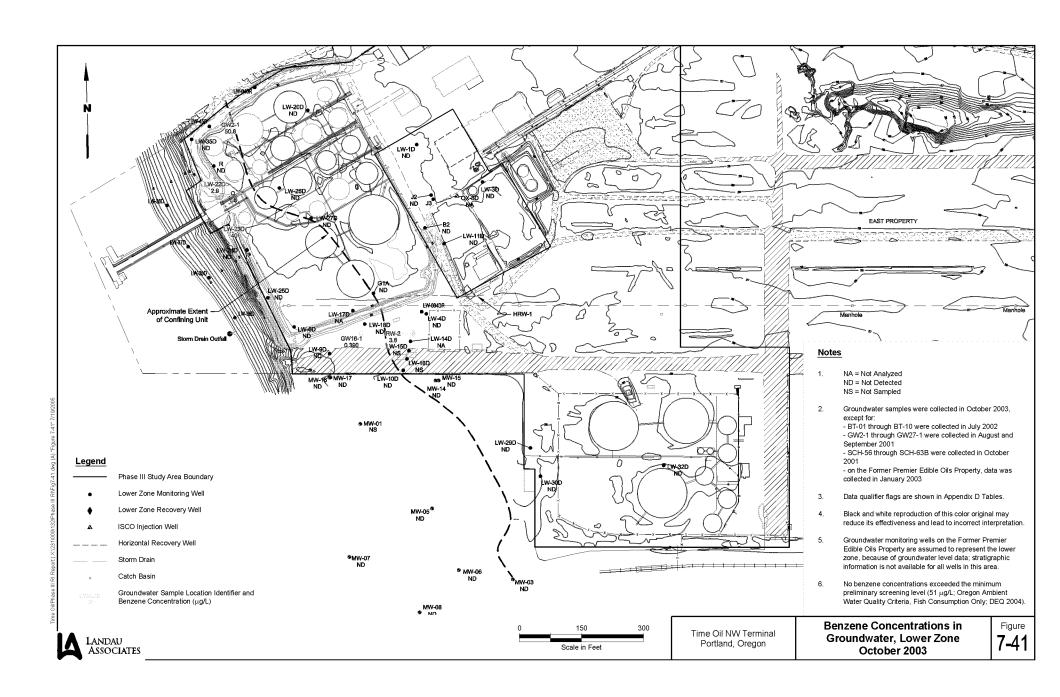


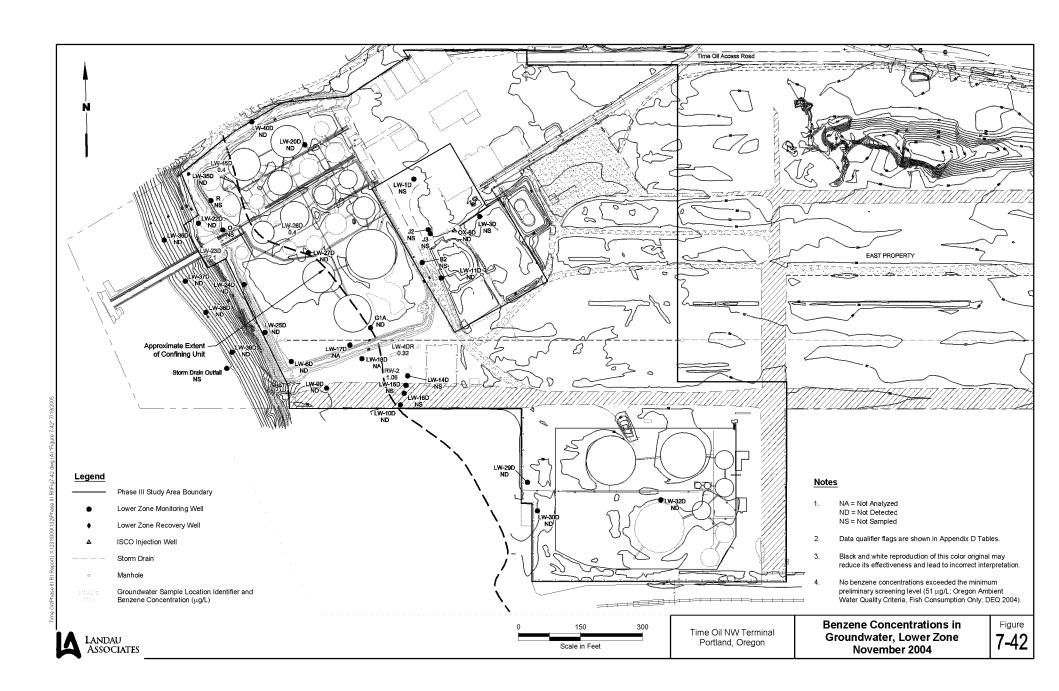


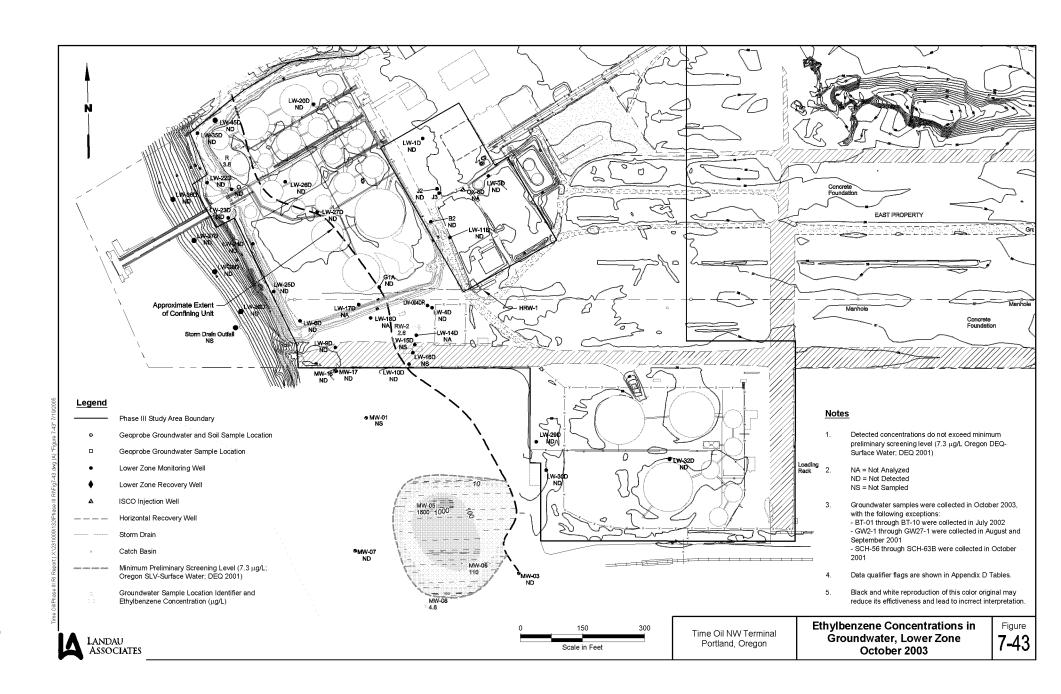


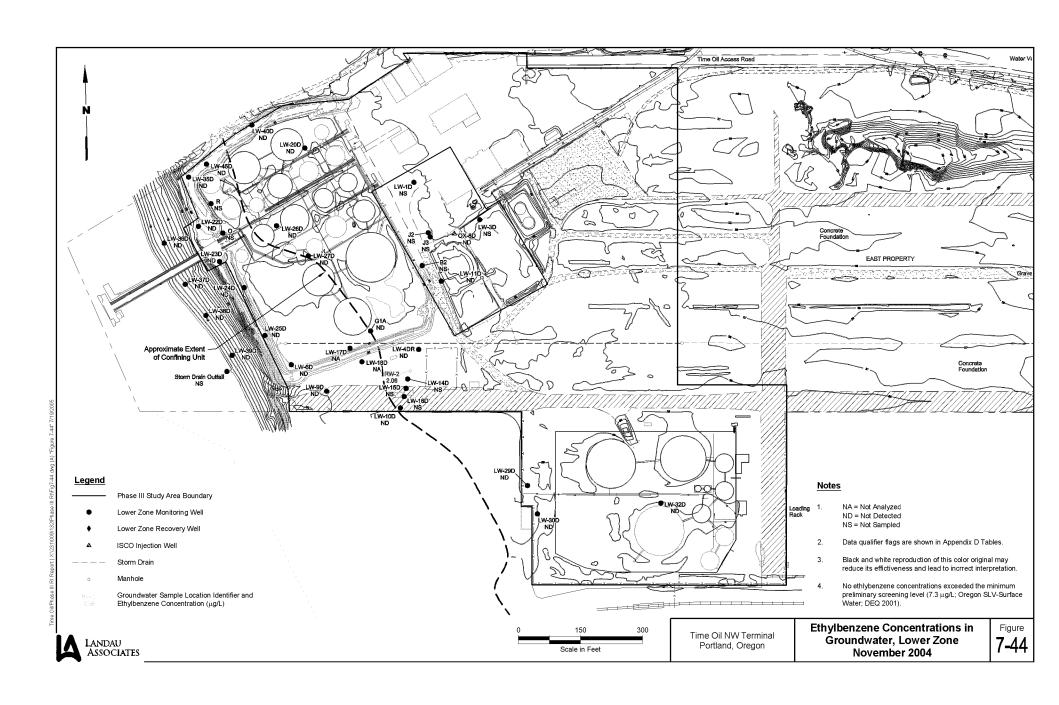


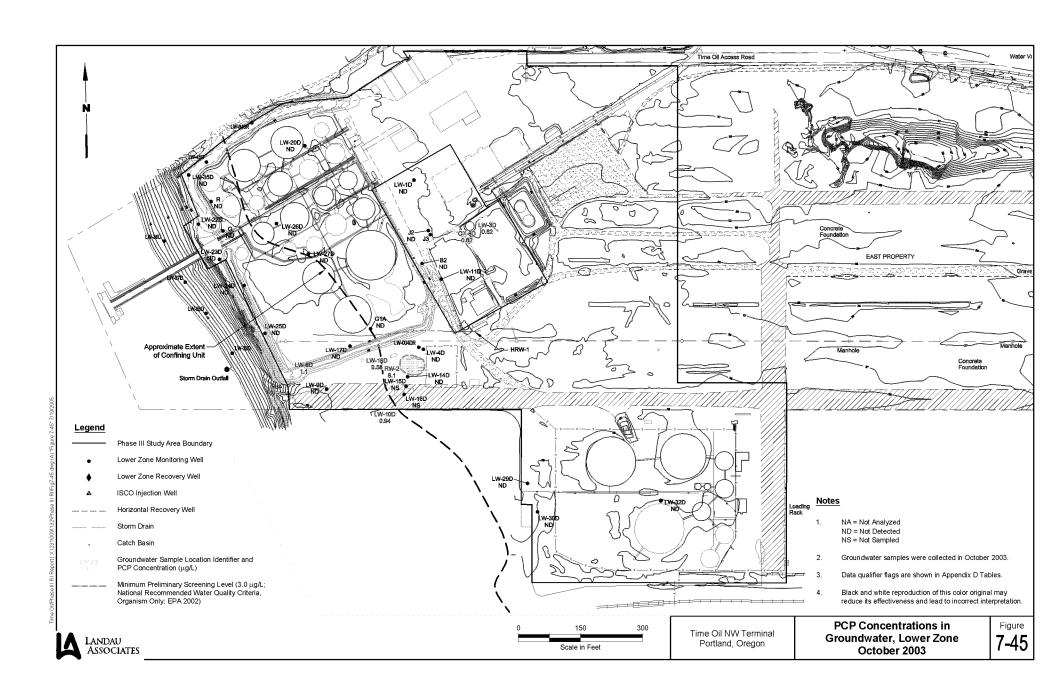


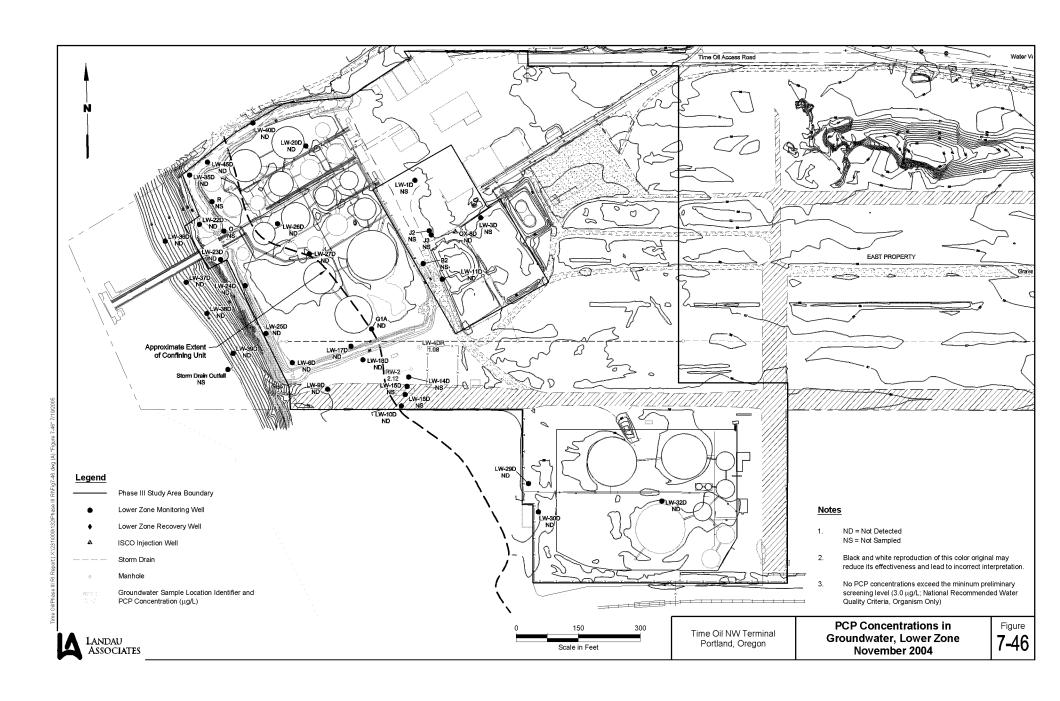


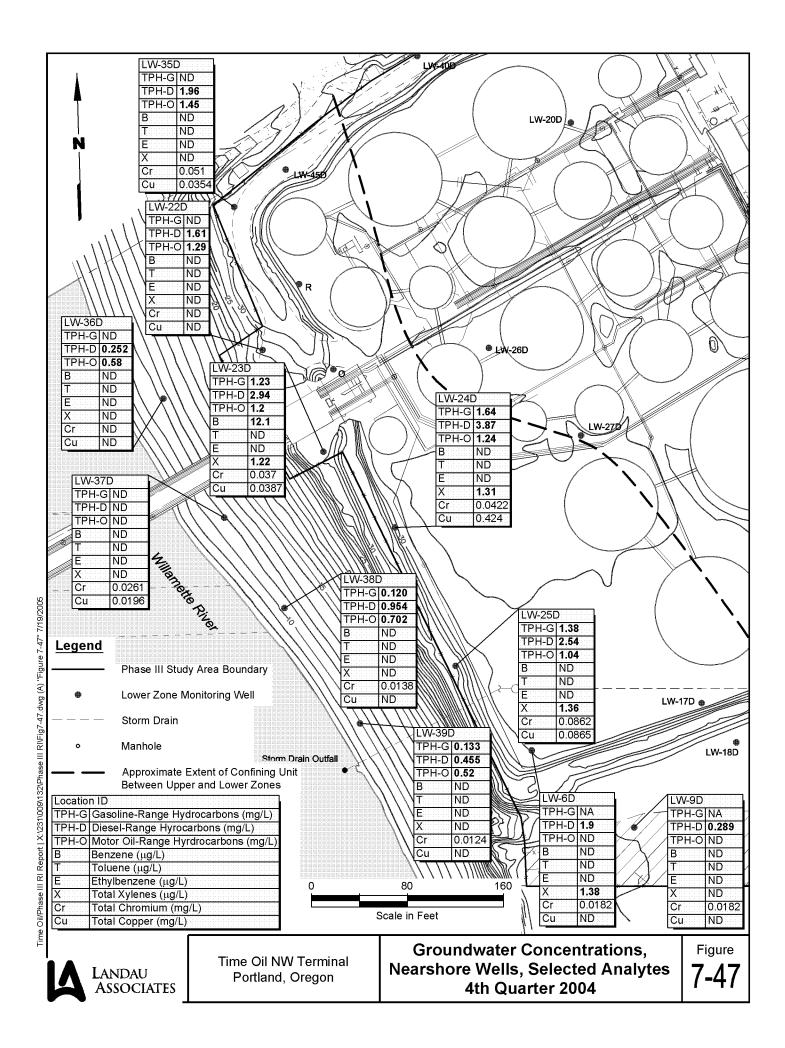


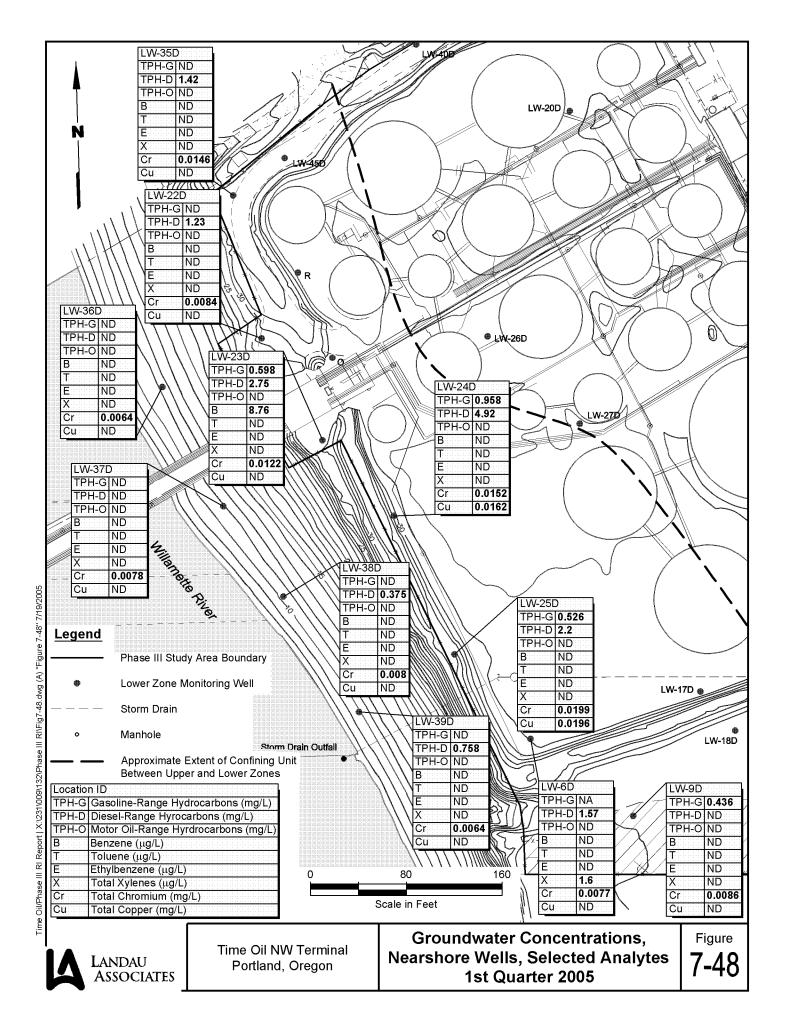


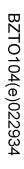


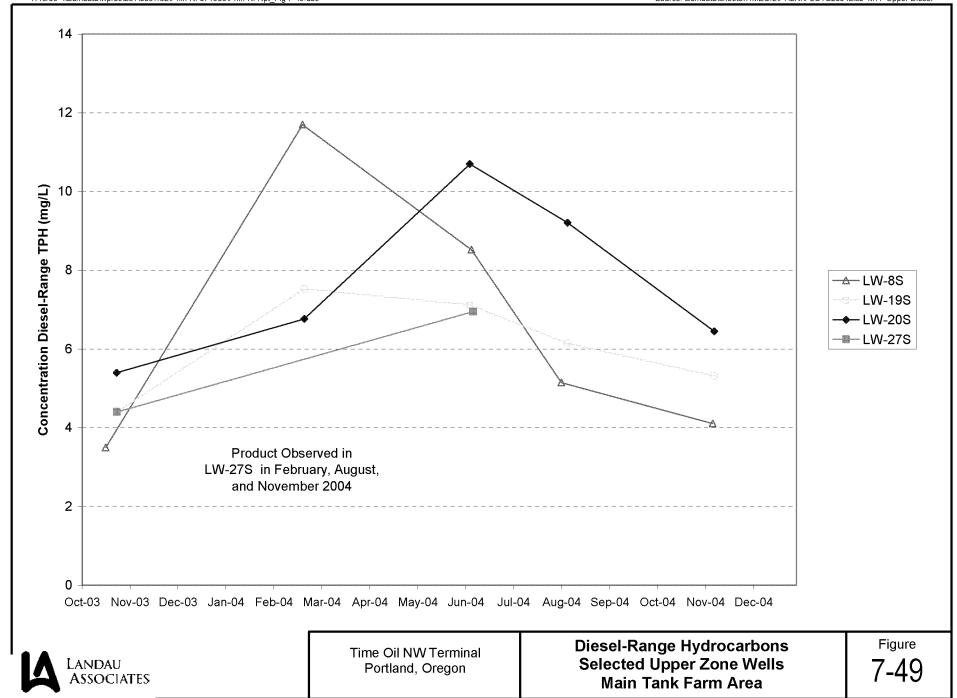


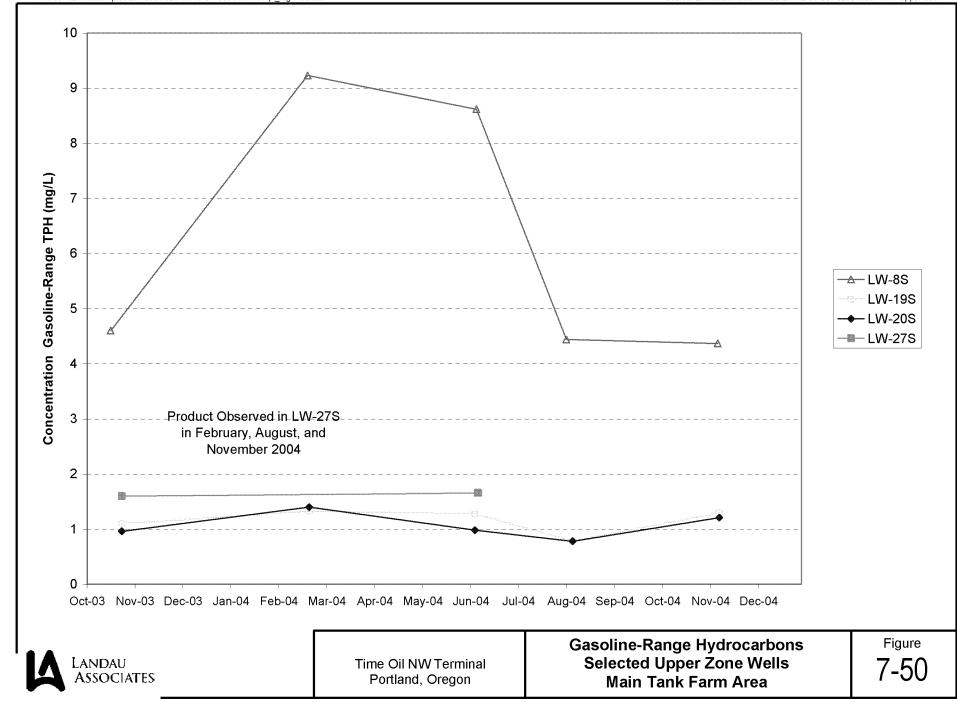


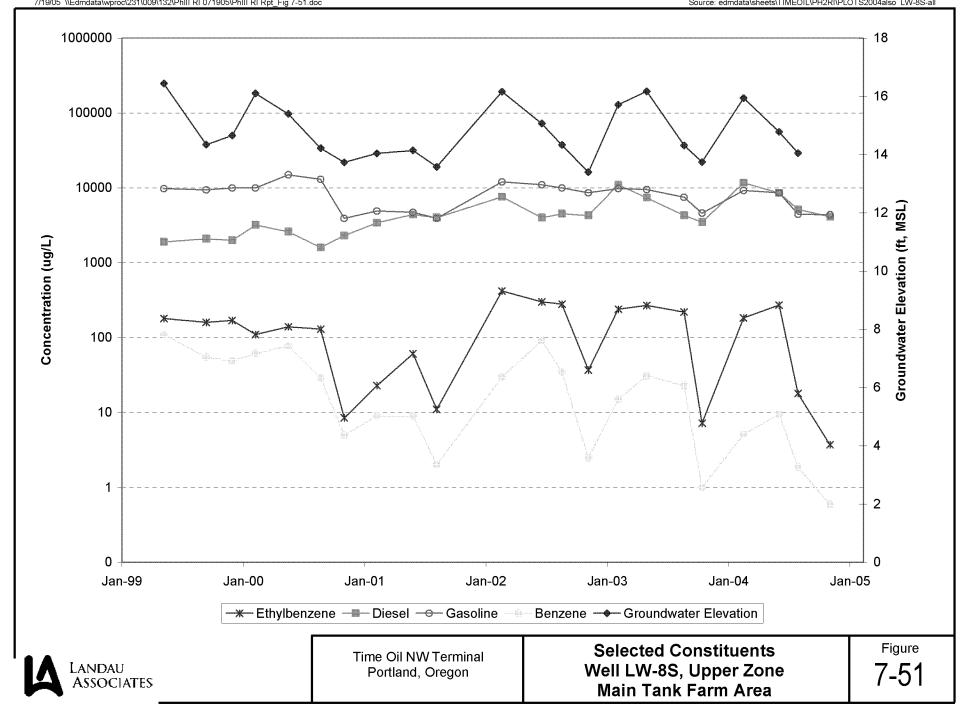


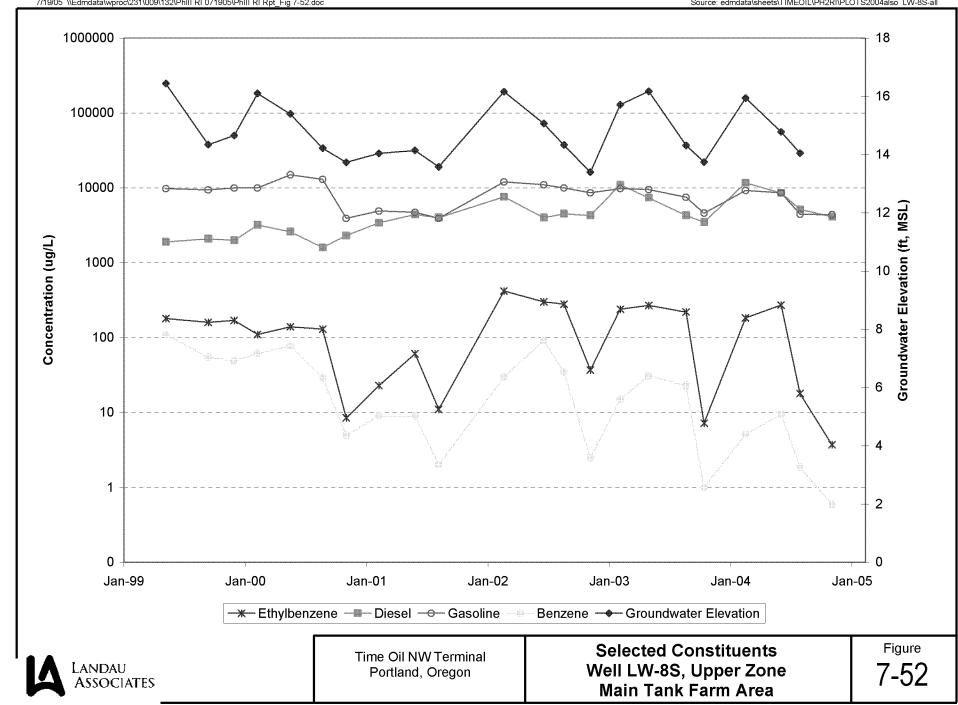


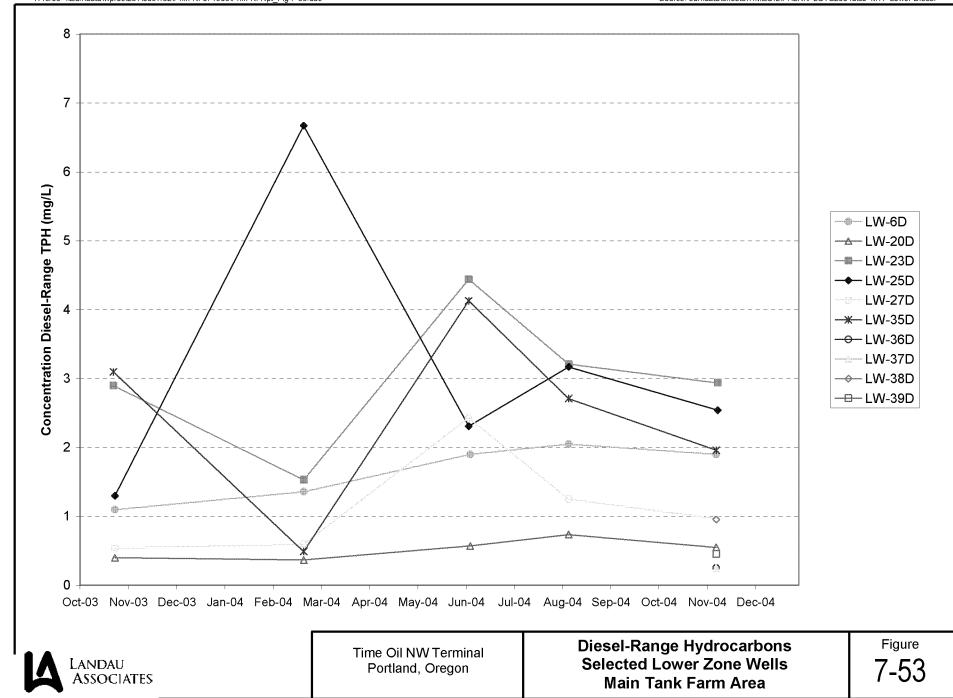


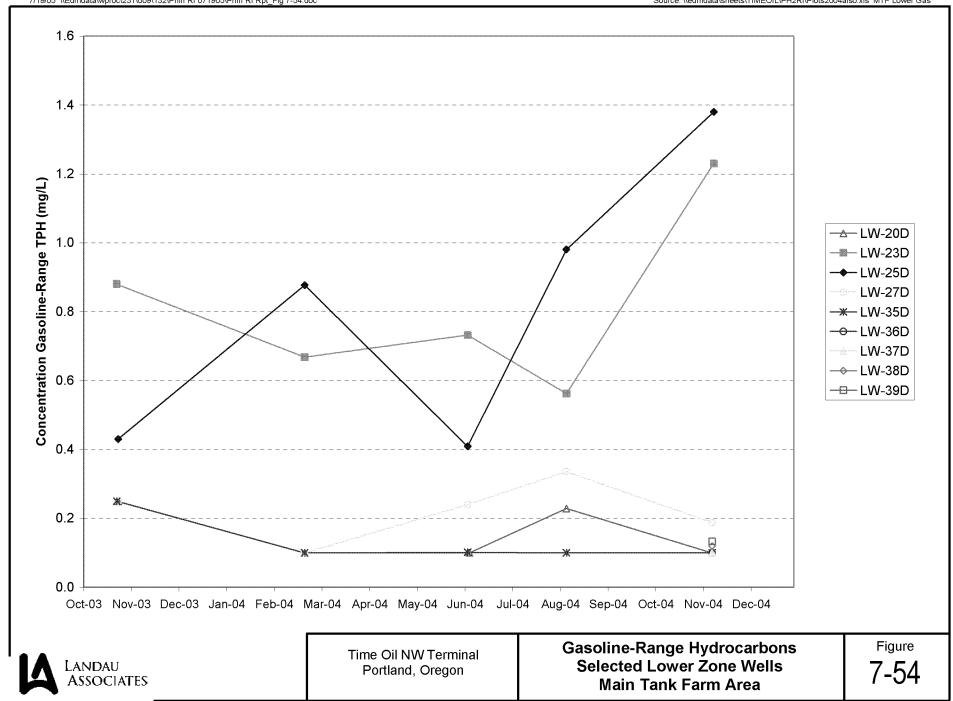


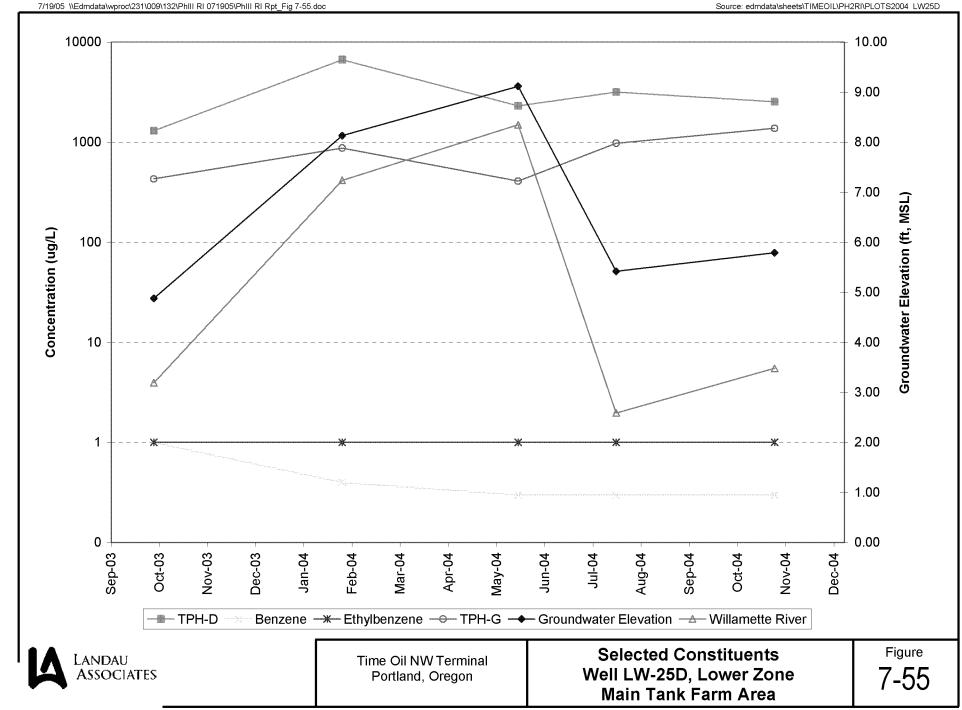


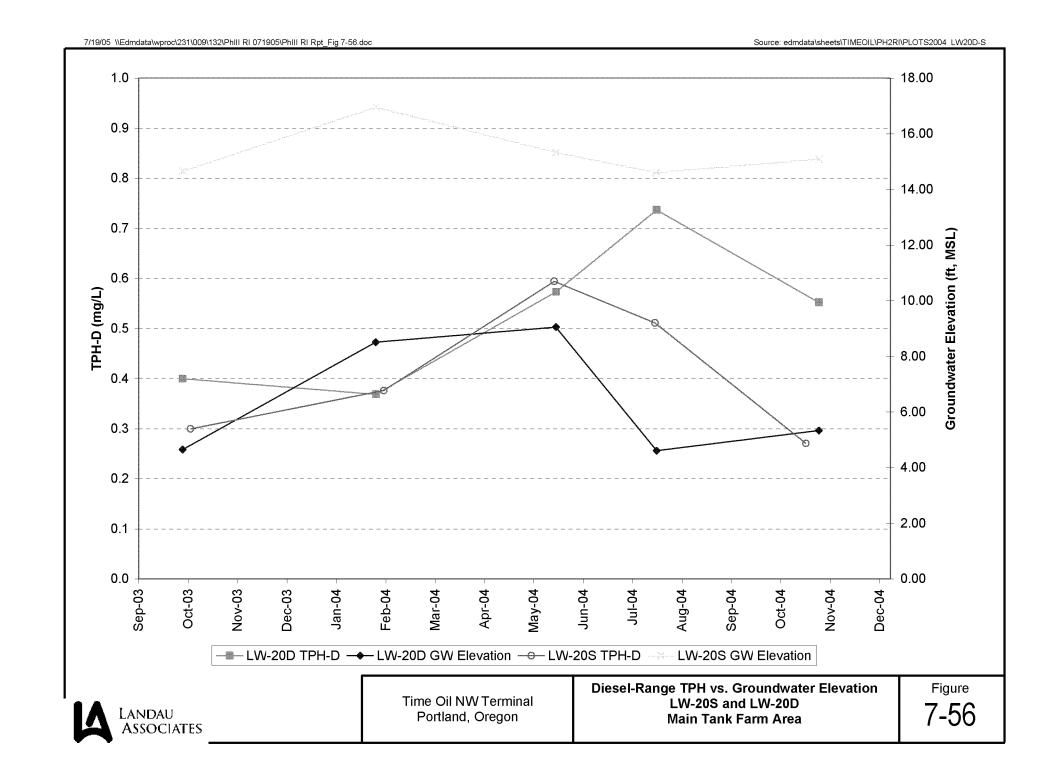


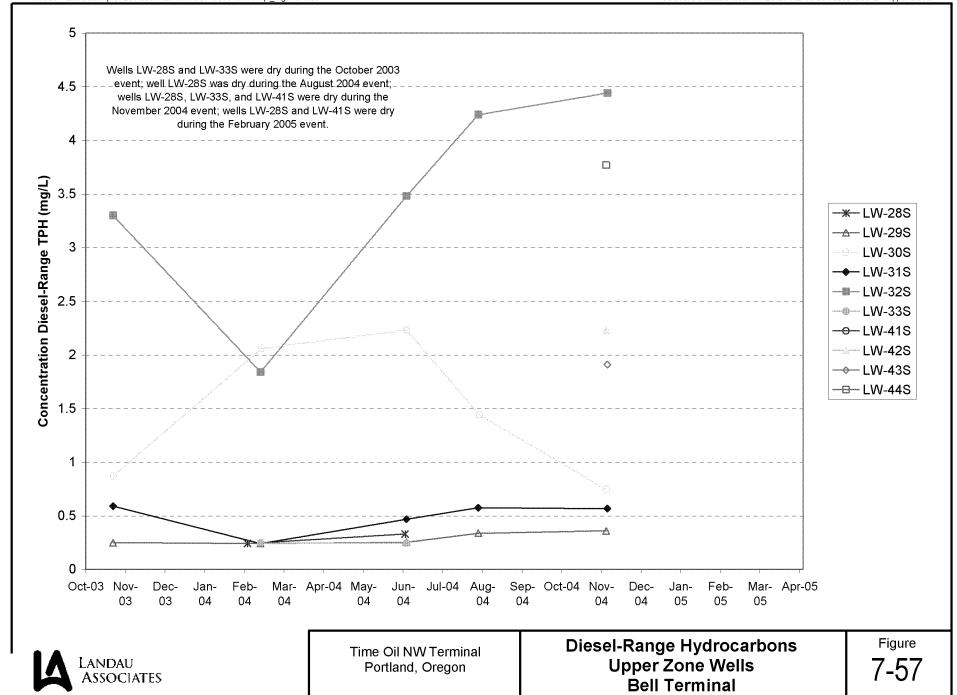


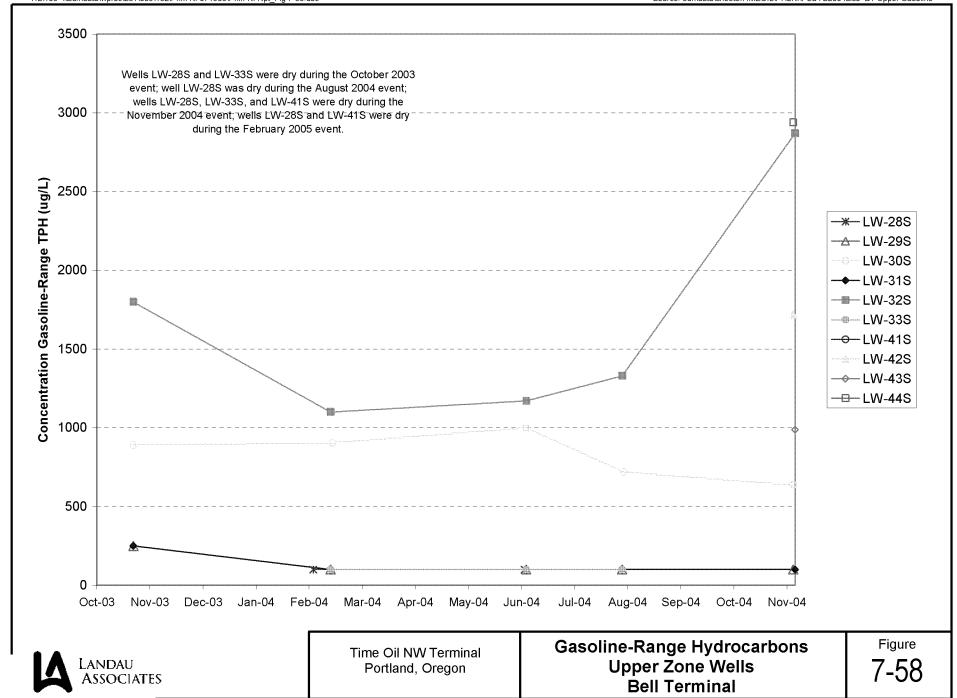


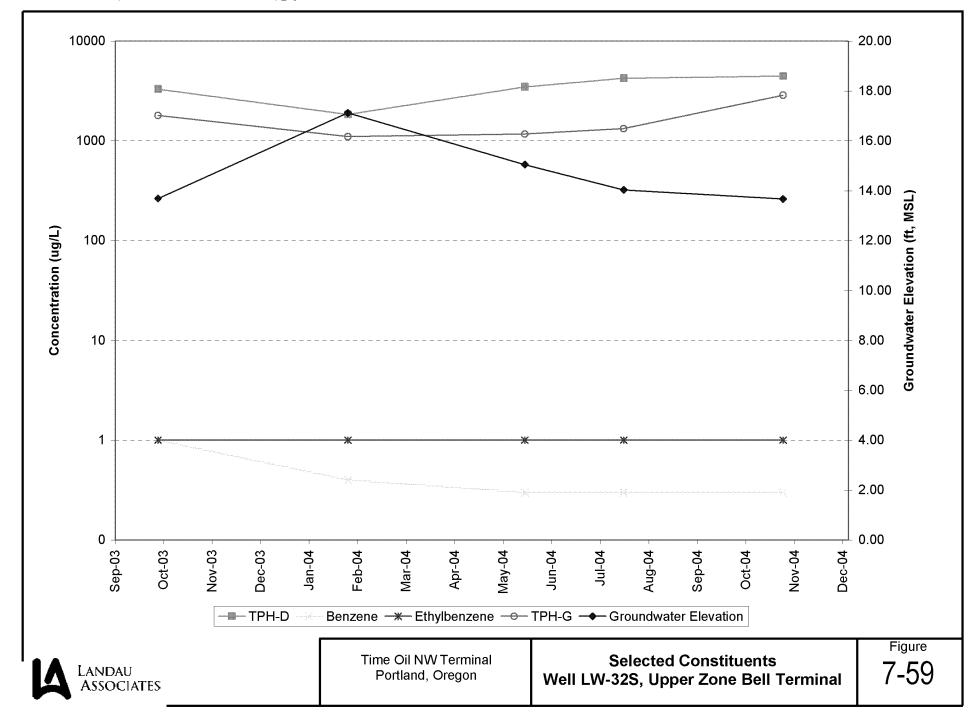


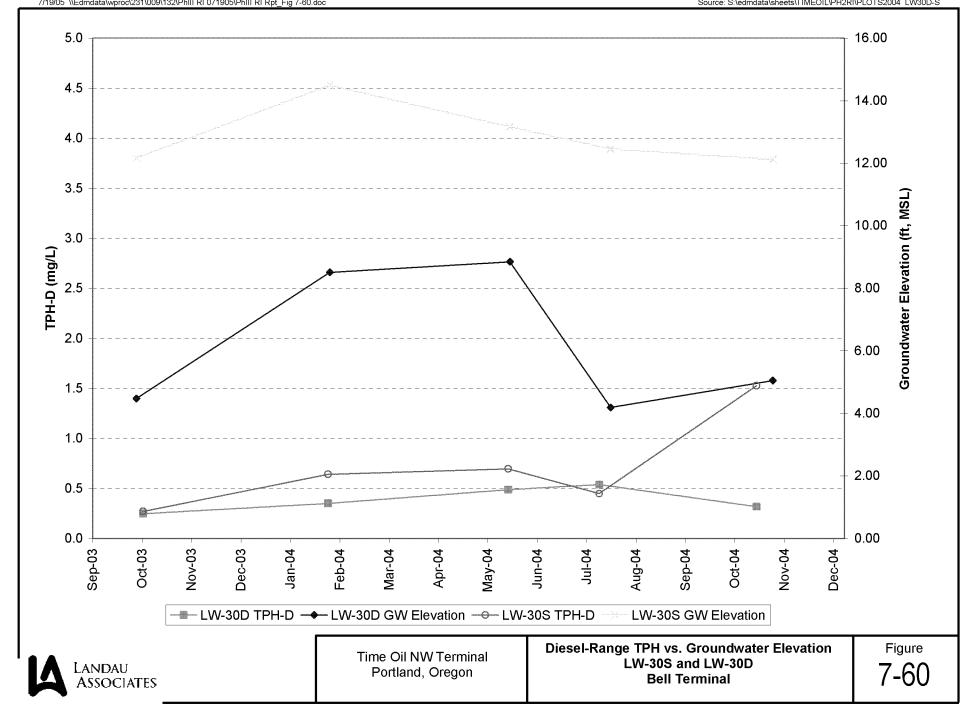


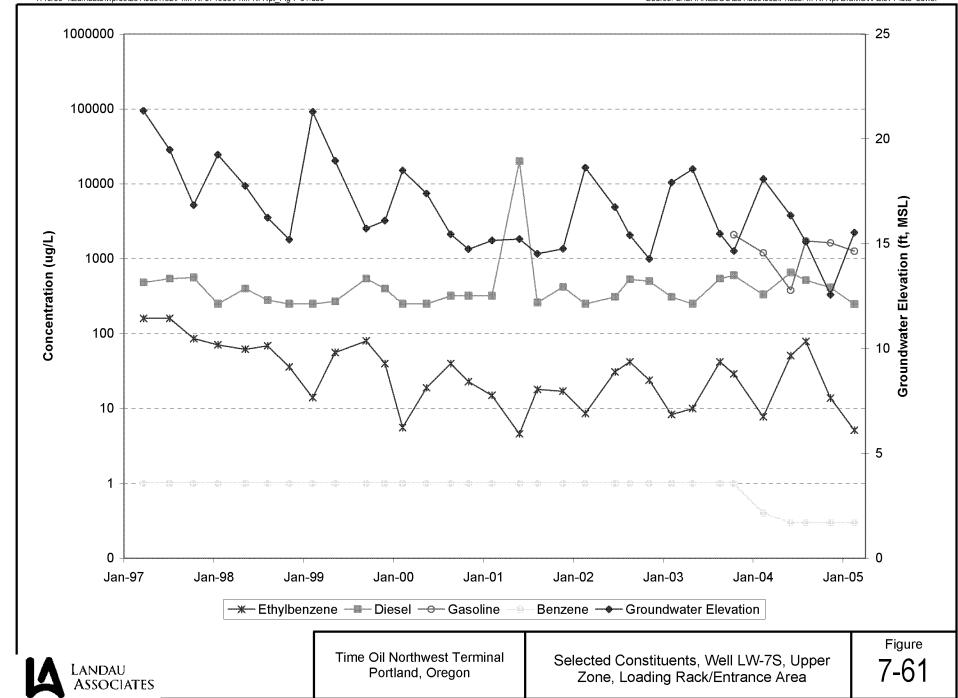


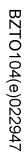


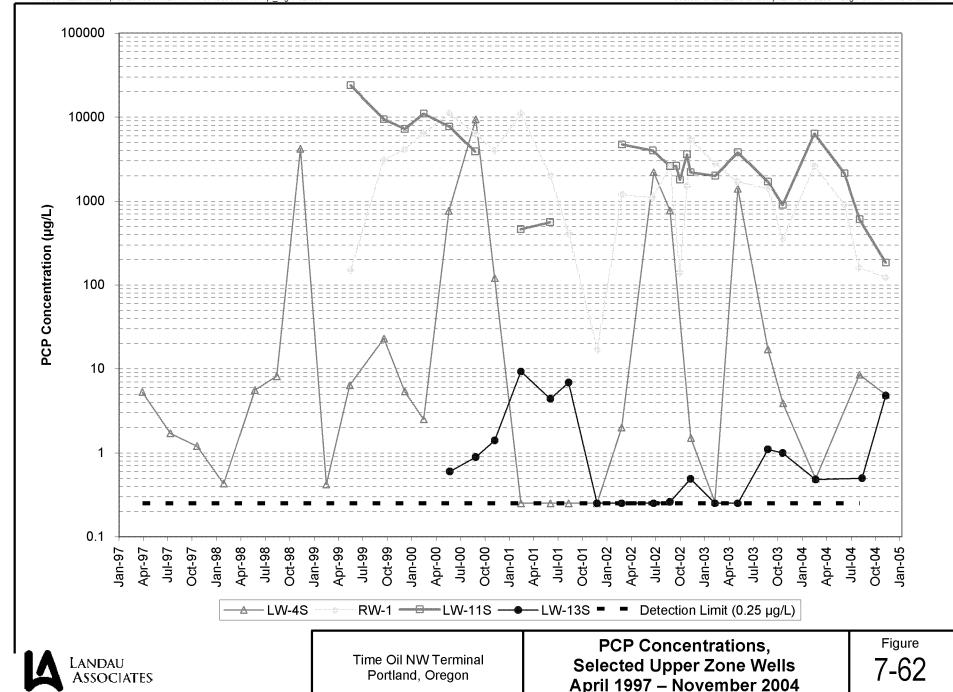




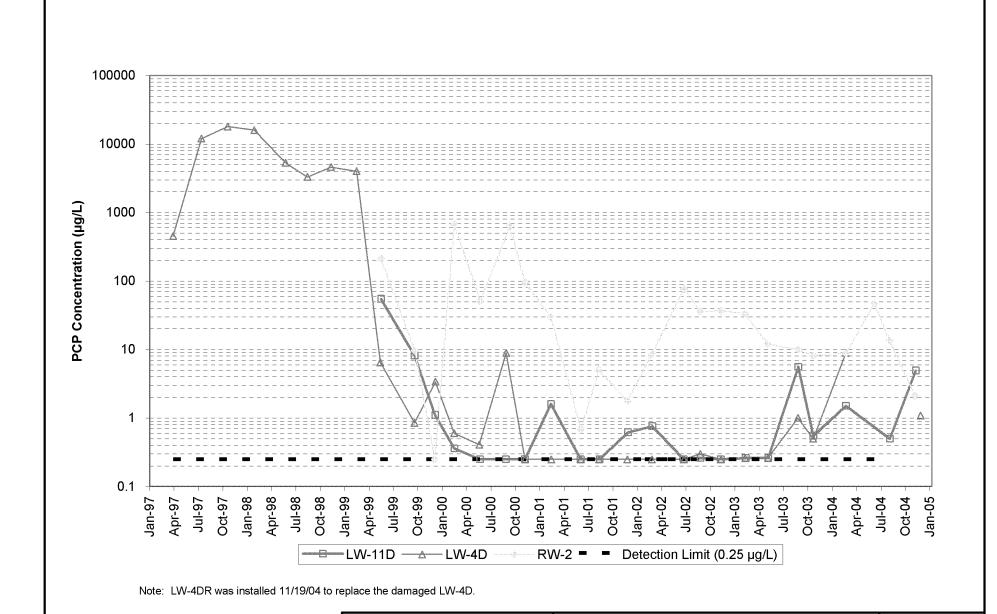






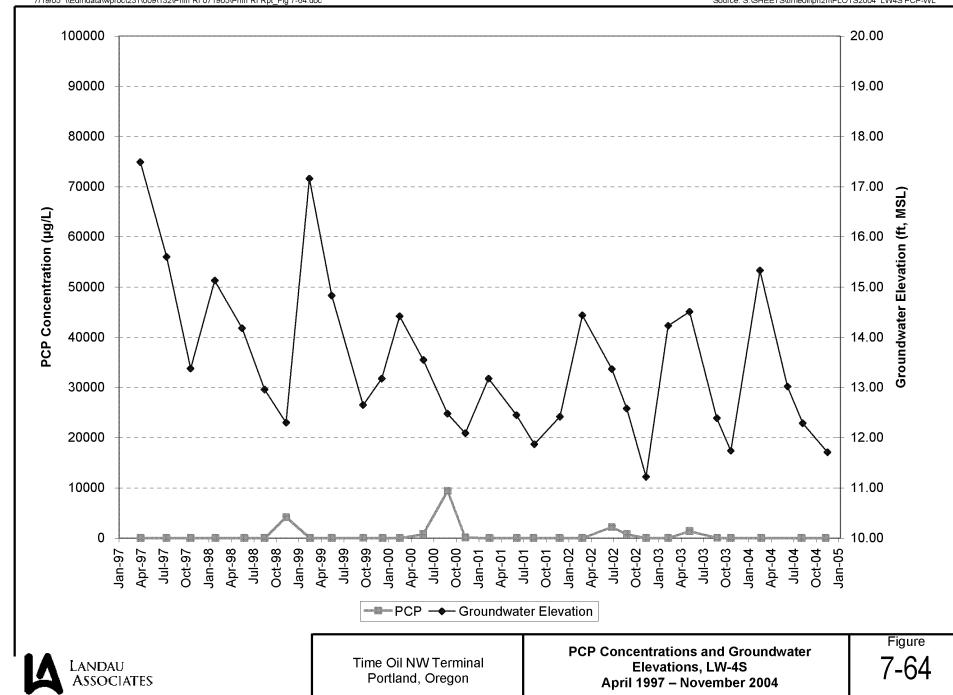


Landau Associates

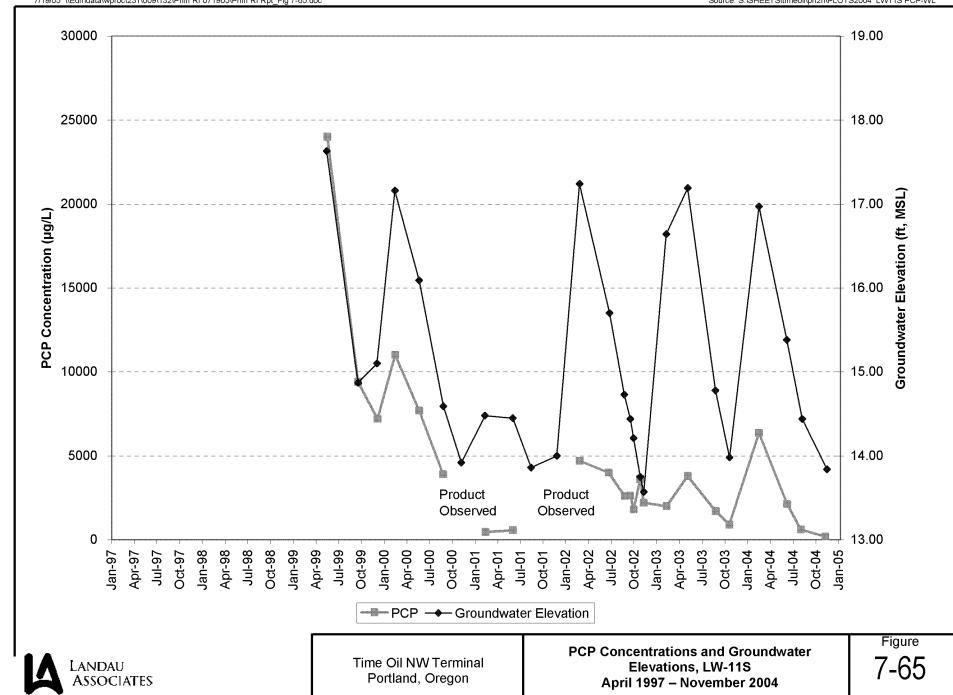


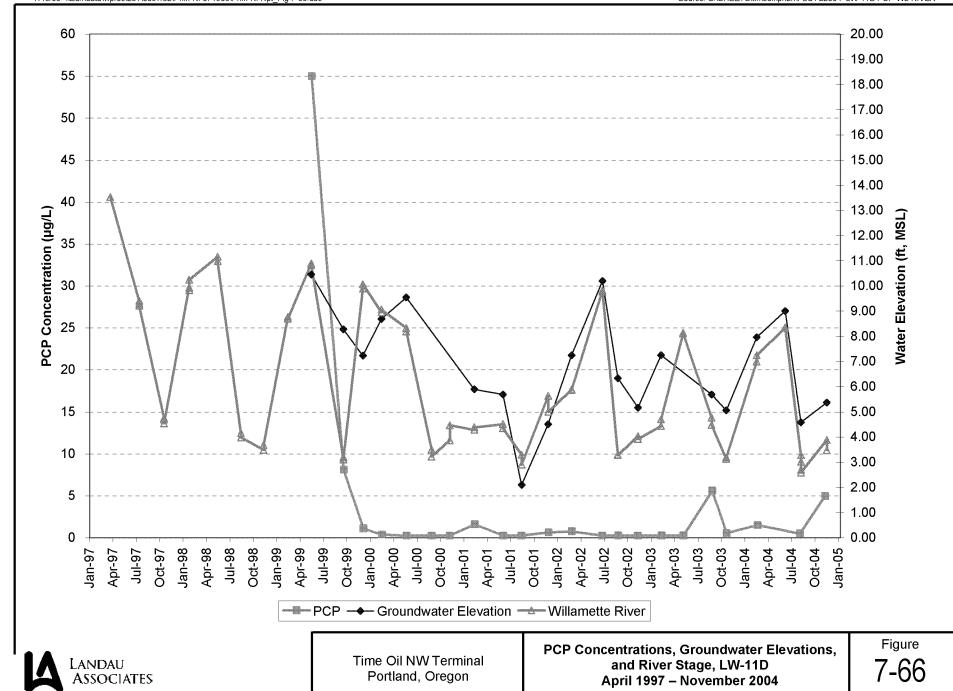
Time Oil NW Terminal Portland, Oregon

PCP Concentrations, Selected Lower Zone Wells April 1997 – November 2004 Figure 7-63



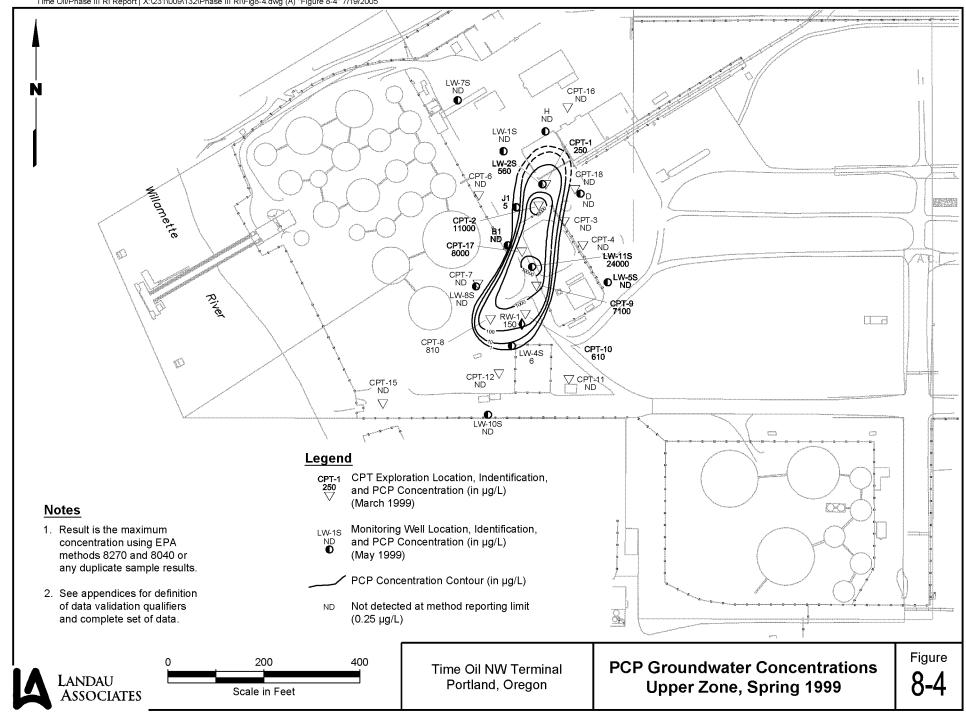


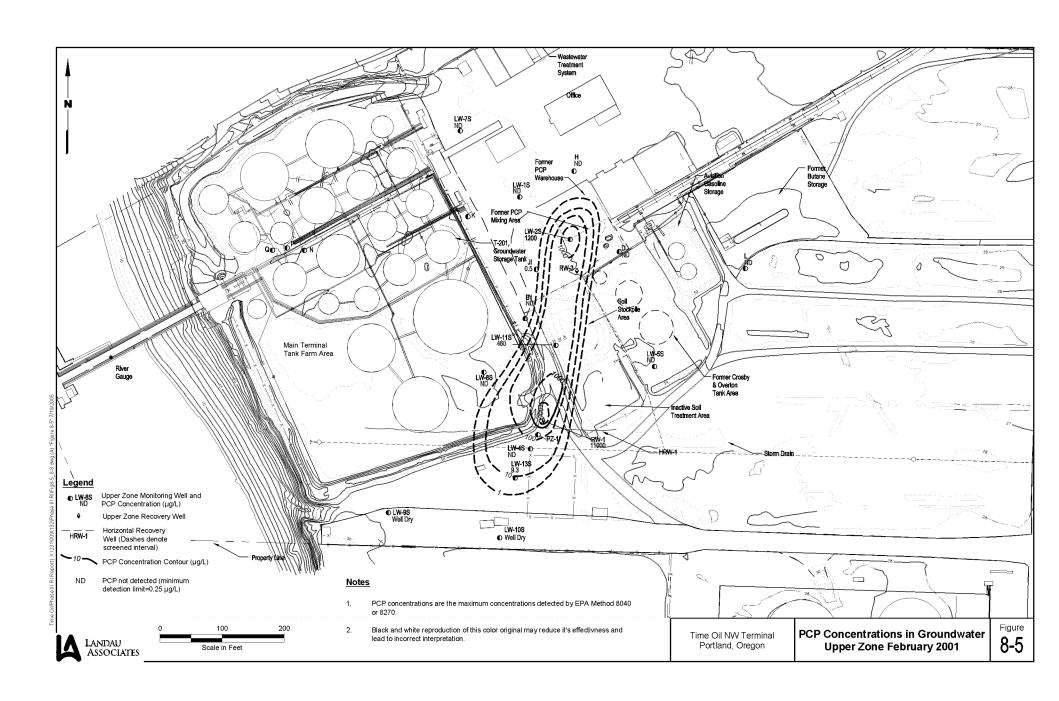




Portland, Oregon

**Conceptual Site Model** 





Portland, Oregon

Lower Zone, March-April 1997

ANDAU

ASSOCIATES

Scale in Feet

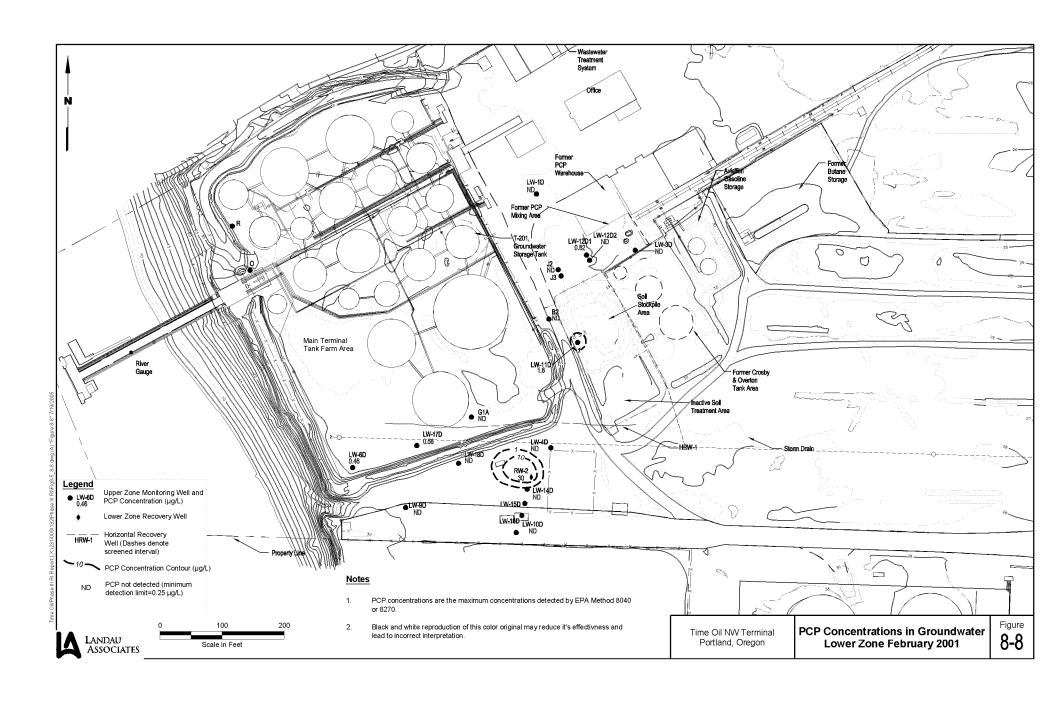


TABLE 2-1 SUMMARY OF QUARTERLY GROUNDWATER ANALYSES TIME OIL NORTHWEST TERMINAL

Well	Sampling Date	SVOC 8270	SVOC SIM	PAH (8270 SIM)	VOC 8260	MTBE 8260	PCP 8040/8270	TPH-D	TPH-Dx	TPH-Gx	PP Metals 6010/7000	Ferrous Iron (MS3500)	Selenium (6010)	TDS	Major Ions	Chloride	PCBs 8081	Dioxin/ Furans	Ethano
B1	April-97	Х			Х		X	Х			Х		\ , ,	Х	Х				
ы	July-97	X			X		X	X			X			X	X				
	October-97	X			X		X	X			X			X	X				
	January-98	X			X		X	X			X			X	X				
	May-98	X			X		X	X			X			X	^	Х			
	August-98	X			X		X	X			X			X		X			
	November-98	X			X		X	X			X			X		X			
	February-99	X	Х		X		X	X			X			X	X	X			
	May-99	X	^		X		X	X			X			X	^	X			
	September-99	X			X		X	X			X			X		X			
	December-99 (a,b	X			X		X	X			X			X		X			Х
	February-00	X			X		X	X			X			X	X	X			X
	May-00	X			X		X	X	Х	Х	X			X		X			X
	August-00	X			X		X	X	X	X	X			X		X			X
	November-00	X			X		X	X	X	X	X			X		X			X
	February-01	X			X		X	X	X	X	X			X	Х	X			X
	June-01	X			X		X	^	X	X	X			X		X			
	August-01	X			X		X		X	X	X			X		X			
	November-01	X			X		X		X	X	X			X		X			
	February-02	X			X		X		X	X	X			X	Х	X			
	June-02	X			X		X		X	X	X			X		X			
	August-02	X			X		X		X	X	X			X		X			
	November-02	X			X		X		X	X	X			X		X			
	February-03	X			X		X		X	X	X			X	Х	X			
	May-03	X			X		X		X	X	X			X		X			
	August-03	X			X		X		X	X	X			X		X			
	October-03	X			X		X		X	X	X			X		X			
	February-04	X			X		X		X	X	X			X		X			
	August-04	X			X		X		X	X	X			X		X			
	/ tagast s t																		
B2	April-97	Х			Х		Х	Х			Х			Х	Х				
	July-97	X			X		X	X			X			X	X				
	October-97	X			X		X	X			X			X	X				
	January-98	X			X		X	X			X			X	X				
	May-98	X			X		X	X			X			X	,,	Х			
	August-98	X			X		X	X			X			X		X			
	November-98	X			X		X	X			X			X		X			
	February-99	X			X		X	X			X			X	Х	X			
	May-99	X			X		X	X			X			X		X			
	September-99	X			X		X	X			X			X		X			
	December-99	X			X		X	X			X			X		X			
	February-00	X			X		X	X			X			X	Х	X			
	May-00	X			X		X	X			X			X		X			
	August-00	X			X		X	X			X			X		X			
	November-00	X			X		X	X			X			X		X			
	February-01	X			X		X	X			X			X	Х	X			
	June-01	X			X		X				X			X		X			
	August-01	X			X		X				X			X		X			
	November-01	X			X		X				X			X		X			
	February-02	X			X		X	Х			X			X	Х	X			
	June-02	X			X		X	,,			X			X		X			
	August-02	X			X		X				X			X		X			
	November-02	X			X		X				X			X		X			
	February-03	X			X		X	Х			X			X	Х	X			
	i Culualγ-03	^			^	1	_ ^	^		1	^			^	_ ^	_ ^	1		(

	Sampling	svoc	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethan
	August-03	Х			Х		Х				Х			Х		Х			
	October-03	Х			Х		Х				Х			Х		Х			
	February-04	Х			Х		Х				Х			Х		Х			
	August-04	Х			Х		Х				Х			Х		Х			
D	April-97	Х			Х		X	X			X			Х	Х		X		
	July-97	X			X		X	X			X			X	X				
	October-97	X			X		X	X			X			X	X		Х		
	January-98	X			X		X	X			X			X	X				
	May-98	X			X		X	X			X			X		Х			
	August-98	X			X		X	X			X			X		X			
	November-98	X			X		X	X			X			X		X			
	February-99	X			X		X	X			X			X	X	X			
	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	X			X		X	X			X			X		X			
	December-99 (b)	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			X			Х	Х	X			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			X			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х				Х			Х		Х			
	August-01	Х			Х		Х				Х			Х		Х			
	November-01	Х			Х		Х				Х			Х		Х			
	February-02	Х			Х		Х				Х			Х	Х	Х			
	June-02	Х			Х		Х				Х			Х		Х			
	August-02	Х			Х		Х				Х			Х		Х			
	November-02	Х			Х		Х				Х			Х		Х			
	February-03	Х			Х		Х				Х			Х	Х	Х			
	May-03	Х			Х		Х				Х			Х		Х			
	August-03	Х			Х		Х				X			Х		Х			
	October-03	Х			Х		Х				Х			Х		Х			
	February-04	Х			Х		Х				Х			Х		X			
	August-04	Х			Х		Х				Х			Х		Х			
J1	April 07						X				V			~					
JI	April-97	X			X			X			X			X	X			X	
	July-97 October-97	X					X				X			X	X			X	-
		X			X		X	X			X			X	X			Х	
	January-98 May-98	X			X		X	X			X			X		Х		X	
					X		X	X								X		X	
	August-98 November-98	X			X		X	X			X			X		X			
	February-99	X			X		X	X			X			X	X	X		Х	
	May-99				X		X	X			X			X	X	X		X	
	September-99	X			X		X	X			X			X		X			
	December-99 (a,b				X		X	X			X			X		X			
	February-00	X			X		X	X			X			X	X	X			
	May-00	X			X		X	X			X			X		X			
	August-00	×			X		X	X			X			X		X			
	November-00	X			X		X	X			X			X		X			
	February-01	X			X		X	X			X			X	Х	X			
	June-01	X			X		X				X			X		X			
	August-01	X			X		X				X			X		X			
	November-01 February-02	X			X		X	1			Х		1	Х	1	Х			í

	Sampling	svoc	svoc	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Etha
	June-02	Х			Х		Х				Х			Х		Х			
	August-02	Х			Χ		Х				Х			Х		Х			
	November-02	Х			Х		Х				X			Х		Х			
	February-03	Х			Х		Х				X			Х	Х	Х			
	May-03	Х			Х		Х				Х			Х		Х			
	August-03	Χ			Χ		Х				Х			Х		Х			
	October-03	Χ			Χ		Х				Х			Х		Х			
	February-04	Х			Х		Х				Х			Х		Х			
	August-04	Х			Х		Х				Х			Х		Х			
J2	April-97														Х				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	Х			X		Х	Х			Х			Х	Х				
	January-98	Х			Х		Х	Х			Х			Х	Х				
	May-98	Х			Х		Х	Х			Х			Х		Х			
	August-98	Х			Х		Х	Х			Х			Х		Х			
	November-98	Х			Х		Х	Х			Х			Х		Х			
	February-99	Х			Х		Х	Х			Х			Х	Х	Х			
	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Х		Х			
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Χ		Х	Х			Х			Х		Х			
	August-00	Х			Х		X	Х			Х			Х		Х			
	November-00	Х			Х		Х	Х			X			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		X				Х			Х		Х			
	August-01	Х			Х		Х				Х			Х		Х			
	November-01	Х			Х		Х				Х			Х		Х			
	February-02	Х			Χ		Х				Х			Х	Х	Х			
	June-02	Х			Х		Х				Х			Х		Х			
	August-02	Х			Х		Х				Х			Х		Х			
	November-02	Х			Χ		Х				Х			Χ		Х			
	February-03	Х			Х		Х				Х			Х	Х	Х			
	May-03	Х			Х		Х				X			Χ		Х			
	August-03	Х			Х		Х				Х			Х		Х			
	October-03	Х			Х		Х				Х			Χ		Х			
	February-04	Х			Χ		X				Х			Χ		Х			
	August-04	Х			Х		Х				Х			Х		Х			
J3	April-97	Х			Х		Х	Х			Х			Х	Х				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	Х			Χ		Х	Х			Х			Х	Х				
	January-98	Х			Х		Х	Х			Х			Х	Х				
	May-98	Х			Х		Х	Х			Х			Х		Х			
	August-98	Х			Х		Х	Х			Х			Х		Х			
	November-98	Х			Х		Х	Х			Х			Х		Х			

	Sampling	svoc	svoc	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethan
G1A	April-97	Х			Х		Х	Х			Х			Х	Х				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	Х			Х		X	Х			Х			Х	Х				
	January-98	Х			Х		Х	Х			X			Х	Х				
	May-98	Х			Х		Х	Х			Х			Х		Х			
	August-98	Χ			Х		X	Х			Х			Х		X			
	November-98	Χ			Х		X	Х			Х			Х		x			
	February-99	Х	Х		Х		X	Х			Х			Х	Х	Х			
	May-99	Х			Х		Х	Х			X			Х		Х			
	September-99	Х			Х		Х	Х			Х			Х		Х			
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			X			Х		Х			
	November-00	Х			Х		X	X			X			Х		X			
	February-01	Х			Х		Х	X			Х			Х	Х	X			
	June-01	Х			Х		Х	Х			Х			Х		Х			
	August-01	Х			Х		X	X			Х			Х		X			
	November-01	Х			Х		X	Х			X			Х		Х			
	February-02	Х			Х		X	Х			Х			Х	Х	Х			
	June-02	Х			Х		X	X			Х			Х		X			
	August-02	Х			Х		Х	X			Х			Х		X			
	November-02	X			X		X	X			X			X		X			
	February-03	X			X		X	X			X			X	Х	X			
	May-03	X			X		X	X			X			X		X			
	August-03	X			X		X	Х			X			Х		X			
	October-03	X			X		X		X		X			X		X			
	February-04 June-04	X			X		X		X		X			X		X			
		X			X		X		X		X			X		X			
	August-04 November-04	X			X		X		X		X			X		X			-
	November-04	Х			Х		Х		Х		Х			Х		Х			-
Н	April-97	X			Х		Х	X			X			Х	Х				-
П	July-97	X			X		X	X			X			X	X				-
	October-97	X			X		X	X			X			X	X				-
	January-98	X			X		X	X			X			X	X				-
	May-98				^		X	^			X				^				-
	August-98						X				X								-
	November-98						X				X								-
	February-99						X				X								-
	May-99						X				X								<del></del>
	September-99						X				X								
	December-99						X				X								
	February-00						X				X								-
	May-00						X				X								_
	February-01						X				X								
	February-02						X				X								
	February-03						X				X								
.,		,					,	,.						,.					
K	April-97 July-97	X			X		X	X			X X			X					
	October-97	X			X		X	X			X			X					-
	January-98	X			X		X	X			X			X					-
					^		^							^					-
	May-98 August-98										X						1		1

	Sampling	svoc	svoc	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethan
	November-98										X								
	February-99										X								
	May-99										X								
	September-99 December-99										X X								
	February-00										X								-
	May-00										X								-
	August-00										X								-
	November-00										X								
	February-01										X								
	June-01										Х								
	August-01										Х								
	November-01										Х								
	February-02										Х								
	June-02										Х								
	August-02										Х								
	November-02										Х								
	February-03										Х								
	May-03										X								
	August-03										X								
	October-03			Х	X					X	X								
	February-04 June-04				BTEX BTEX					X									-
	August-04				BTEX					X									-
	November-04				BTEX					X									-
	THOYETTIBET 64				BILX														
L	April-97	Х			Х		Х	Х			Х			Х	Х				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	Х			Х		Х	Х			Х			Х	Х				
	January-98	Х			X		X	Х			X			Х	Х				
	May-98	X			X		X	X			X			X		X			
	August-98	X			X		X	X			X			X		X			
	November-98 February-99	X			X		X	X			X			X	X	X			
	May-99	X			X		X	X			X			X		X			-
	September-99	X			X		X	X			X			X		X			-
	December-99	X			X		X	X			X			X		X			-
	February-00	X			X		X	X			X			X	X	X			
	May-00	X			X		X	X			X			X		X			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	February-02	Х			Х		Х	Х			Х			Χ	Х	Х			
0	April-97	Х			Х														
	July-97	Х			X									Х					
	October-97	X			X														
	January-98	X			X														
	May-98	X			X														
	August-98 November-98	X			X														
	February-99	X			X														-
	May-99	X			X														
	September-99	X			X														
	December-99	X			X														
	February-00	X			X														
	May-00	X			X														

	Sampling	SVOC	SVOC	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethane
	August-00	Х			Х														
	November-00	Х			Х														
	February-01	Х			Х														
	June-01	Х			Х														
	August-01	Х			Х														
	November-01	Х			Х														
	February-02	Χ			Х														
	June-02	Х			Х														
	August-02	Χ			Х														
	November-02	Х			Х														
	February-03	Х			Х														
	May-03	Х			Х														
	August-03	Х			Х														
	October-03	Х			Х														
R	April-97	Х			Х														
	July-97	Х			Х									Х					
	October-97	Х			Х														
	January-98	Х			Х														
	May-98	Х			Х														
	August-98	Х			Х														
	November-98	Х			Х														
	February-99	Х			Х														
	May-99	Х			Х														
	September-99	Х			Х														
	December-99	Х			Х														
	February-00	Х			Х														
	May-00	Х			Х														
	August-00	Х			Х														
	November-00	Х			Х														
	February-01	Х			Х														
	June-01	Х			Х														
	August-01	Х			Х														
	November-01	X			X														
	February-02	X			Х														
	June-02	X			X														
	August-02	X			X														
	November-02	Х			X														
	February-03	Х			X														
	May-03	Х			X														
	August-03	Х			Х														
	October-03	Х			Х														
LW1D	April-97	Х			Х		Х	Х			Х			Х	X				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	X			X		X	X			X			X	X				
	January-98	X			X		X	X			X			X	X				
	May-98	X			X		X	X			X			X		Х			
	August-98	X			X		X	X			X			X		X			
	November-98	X			X		X	X			X			X		X			
	February-99	X			X		X	X			X			X	Х	X			
	May-99	X			X		X	X			X			X		X			
	September-99	X			X		X	X			X			X		X			
	December-99	X			X		X	X			X			X		X			
	February-00	X			X	-	X	X			X			X	X	X			

	Sampling	svoc	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
	May-00	Х		(,	Х		Х	Х			Х	(,	(,	Х		Х			
	August-00	X			X		X	X			X			X		X			
	November-00	X			X		X	X			X			X		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х				Х			Х		Х			
	August-01	Х			Х		Х				Х			Х		Х			
	November-01	Х			Х		Х				X			Х		Х			
	February-02	Х			Х		Х				Х			Х	Х	Х			
	June-02	Х			Х		Х				X			Х		X			
	August-02	X			X		Х				X			Х		X			
	November-02	X			X		X				X			Х		X			-
	February-03 May-03	X			X		X				X			X	X	X X			
	August-03	X			X		X				X			X		X			
	October-03	X			X		X				X					X			
	October-05						Α				Λ					Α			
LW1S	April-97	Х			Х		Х	Х			X			Х	Х				
21110	July-97	X			X		X	X			X			X	X				
	October-97	X			X		X	X			X			X	X				
	January-98	Х			Х		Х	Х			Х			Х	Х				
	May-98	Х			Х		Х	Х			Х			Х		Х			
	August-98	Х			Х		Х	Х			Х			Х		Х			
	November-98	Х			Х		Х	Х			Х			Х		Х			
	February-99	Х			Х		Х	Х			Х			Х	Х	Χ			
	May-99	Х			Х		X	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Х		Х			
	December-99	X			X		X	X			Х			Х		Х			
	February-00	Х			X		X	X			X			Х	X	X			-
	May-00	X			X		X	X			X			Х		X			
	August-00	X			X		X	X			X			X		X			
	November-00 February-01	X			X		X	X			X			X	X	X			
	June-01	X			X		X	^			X			X	^	X			
	August-01	X			X		X				X			×		X			
	November-01	X			X		X				X			X		X			
	February-02	X			X		X				X			X	Х	X			
	June-02	X			X		X				X			X		X			
	August-02	X			X		X				X			X		X			
	November-02	Х			Х		Х				Х			Х		Х			
	February-03	Х			Х		Х				X			Х	Х	Х			
	May-03	Х			Х		Х				Х			Χ		Х			
	August-03	Х			Х		Х				Х			Х		Х			
	October-03	Х		X	Х		X			Х	Х			Х		Х			
	February-04				BTEX					Х									
	June-04				BTEX					Х									
	August-04				BTEX					Х									
	November-04				Х														-
LW2S*	April 07				~		V								_				
LVV25"	April-97 July-97	X			X		X	X			X			X	Х			X	
	October-97	X			X		X	X			X			X	X			X	
	January-98	X			X		X	X			X			X	X			X	
	May-98	X			X		X	X			X			X	_^	Х		X	
	August-98	X			X		X	X			X			X		X		X	
	November-98	X			X		X	X			X			X		X		X	

	Sampling	SVOC	SVOC	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
	February-99	Х	Х		Х		Х	Х			Х			Χ	Х	Х			
	May-99	Χ			Х		Х	Χ			X			Х	Х	Х		Х	
	September-99	Х			Х		X	Х			X			Х		Х		Х	
	December-99 (a,b	Χ			Х		X	Х			X			Х		Х		Х	
	February-00	Х			Х		X	Х			Х			Х	Х	Х		Х	
	May-00	Χ			Х		Х	Χ			X			Х		Х			
	August-00	Χ			Χ		Х	Χ			Χ			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Χ			Х		Х	Χ			X			Х	Х	Х			
	June-01	Х			Х		X	Х			Х			Х		Х			
	August-01	Х			Х		Х	Х			X			Х		Х			
	November-01	Х			Х		X	Х			Х			Х		Х			
	February-02	Х			Х		Х	Х			Х			Х	Х	Х			
	June-02	Х			Х		Х	Х			Х			Х		Х			
LW3D	April-97	Х			Х		X	X			X			Х	X				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	Х			Х		Х	Х			X			Х	Х				
	January-98	Х			Х		Х	Х			Х			Х	Х				
	May-98	Х			Х		Х	Х			X			Х		Х			
	November-98	Х			Х		Х	Х			Х			Х		Х			
	February-99	Х			Х		Х	Х			Х			Х	Х	Х			
	May-99	Х			Х		Х	Χ			Х			Х		Х			
	September-99	Х			Х		X	Х			X			Х		X			
	December-99	Х			Х		Х	Х			X			Х		Х			
	February-00	Χ			Х		Х	Χ			Χ			Х	Х	Х			
	May-00	Х			Х		X	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			Х			Х		Х			
	November-00	Х			Х		X	Х			Х			Х		Х			
	February-01	Х			Х		X	Х			Х			Х	Х	Х			
	June-01	Χ			Х		Х				X			Х		Х			
	August-01	Х			Х		X				X			Х		Х			
	November-01	Х			Х		Х				Х			Х		Х			
	February-02	Х			Х		Х				Х			Х	Х	Х			
	June-02	Х			Х		Х				Х			Х		Х			
	August-02	Х			Χ		Х				X			Χ		Х			
	November-02	Х			Х		Х				Х			Х		Х			
	February-03	Х			Х		Х				Х			Χ	Х	Х			
	May-03	Х			Х		Х				Х			Х		Х			
	August-03	Х			Х		Х				Х			Х		Х			
	October-03	Х			Х		Х				X			Χ		Х			
	February-04	Х			Х		Х				Х			Х		Х			
	August-04	Х			Х		Х				Х			Х		Х			

	Sampling	svoc	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
LW4D	April-97	Х			Х		Х	Х			Х			Х	Х				
	July-97	Х			Х		Х	Х			Х			Х	Х				
	October-97	Х			Х		Х	Х			Х			Х	Х				
	January-98	Х			Х		Х	Х			Х			Х	Х			Х	
	May-98	Х			Х		Х	Х			Х			Х		Х			
	August-98	Х			Х		Х	Х			Х			Х		Х		Х	
	November-98	Х			Х		Х	Х			Х			Х		Х		Х	
	February-99	Х	Х		Х		Х	Х			Х			Х	Х	Х			
	May-99	Х			Х		Х	Х			Х			Х		Х		Х	
	September-99	Х			Х		Х	Х			Х			Х		Х		Х	
	December-99	Х			Х		Х	Х			Х			Х		Х		Х	
	February-00	Х			Х		Х	Х			Х			Х	Х	Х		Х	
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			Х			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х	Х			Х			Х		Х			
	August-01	Х			Х		Х	Х			Х			Х		Х			
	November-01	Х			Х		Х	Х			Х			Х		Х			
	February-02	Х			Х		Х	Х			Х			Х	Х	Х			
	June-02	Х			Х		Х	Х			Х			Х		Х			
	August-02	Х			Х		Х	Х			Х			Х		Х			
	November-02	Х			Х		Х	Х			Х			Х		Х			
	February-03	Х			Х		Х	Х			Х			Х	Х	Х			
	May-03	Х			Х		Х	Х			Х			Х		Х			
	August-03	Х			Х		Х	Х			Х			Х		Х			
	October-03	Х			Х		Х		Х		Х			Х		Х			
	February-04	Х			Х		Х		Х		Х			Х		Х			
LW4DR	November-04	Х			Х		Х		Χ		Х			Х		Х			
LW4S	April-97	Χ			Х		Х	Х			Х			Х	Х				
	July-97	Х			Х		X	Х			Х			Х	Х				
	October-97	Χ			Х		Х	Х			Х			Х	Х				
	January-98	Χ			Х		Х	Х			Х			Х	Х				
	May-98	Χ			Х		X	Х			Х			Х		Х			
	August-98	Χ			Х		X	Х			X			Х		X			
	November-98	Χ			Х		X	Х			X			Х		Х			
	February-99	Χ			Х		Х	Х			X			Χ	Х	Х			
	May-99	Χ			Х		X	Х			X			Х		Х			
	September-99	Χ			Х		Х	Х			X			Х		Х			
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			Х			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х	Х			Х			Х		Х			
	August-01	Х			Х		Х	Х			Х			Х		Х			
	November-01	Х			Х		Х	Х			Х			Х		Х			
	February-02	Х			Х		Х	Х			Х			Χ	Х	Х			
	June-02	Х			Х		Х	Х			Х			Х		Х			
	August-02	Х			Х		Х	Х			Х			Х		Х			
	November-02	Χ			Х		Х	Х			Х			Х		Х			
	February-03	Х			Х		Х	Х			Х			Х	Х	Х			
	May-03	Χ			Х		Х	Х			Х			Х		Х			

Well	Sampling Date	SVOC 8270	SVOC	PAH (8270 SIM)	VOC 8260	MTBE 8260	PCP 8040/8270	TPH-D	TPH-Dx	TPH-Gx	PP Metals 6010/7000	Ferrous Iron (MS3500)	Selenium (6010)	TDS	Major Ions	Chloride	PCBs 8081	Dioxin/ Furans	Ethano
*****			Oiiii	(0270 01111)		0200			1111-07	1111-01		(11100000)	(0010)		10113			Tuluiis	
	August-03	Х			Х		Х	Х			X			Х		Х			
	October-03	Х			Х		Х		Х		X			Х		Х			
	February-04	Х			Х		X		Х		X			Х		Х			
	August-04	Х			Х		X		Х		X			Х		X			
	November-04	Х			Х		Х		Х		Х			Х		X			-
LW5S	April-97	Х			Х		Х	Х			Х			Х	Х		Х		
	July-97	Х			Х		X	Х			Х			Х	Х		Х		
	October-97	Х			Х		Х	Х			Х			Х	Х		Х		
	January-98	Х			Х		X	Х			Х			Х	Х		Х		
	May-98	Х			Х		X	Х			Х			Х		Х			
	August-98	Х			Х		Х	Х			Х			Х		Х			
	November-98	Х			Х		X	Х			Х			Х		Х			
	February-99	Х			Х		X	Х			Х			Х	Х	Х			
	May-99	Х			Х		X	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Χ		Х			
	December-99	Х			Х		X	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х		Х			
	June-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Χ		Х			
	February-02	Х			Х		Х	Х			Х			Х		Х			
	February-03	Х			Х		Х	Х			Х			Х		Х			
LW6D	April-97	Х			Х		Х	Х			Х			Χ	X				
	July-97	Х			Х		Х	Х			Х			Х	Х			Х	
	October-97	Х			Х		X	Х			Х			Χ	Х				
	January-98	Х			Х		X	Х			Х			Х	Х				
	May-98	Х			Х		X	Х			Х			Х		X			
	August-98	Х			Х		X	Х			Х			Х		X			
	November-98	Х			Х		X	Х			Х			Х		Х			
	February-99	Х			Х		X	Х			X			Х	Х	Х			
	May-99	Х			Х		X	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Χ		Х			
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	X			Х			Χ		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	X			Х			Х	Х	Х			
	June-01	Х			Х		Х	X			Х			Х		X			
	August-01	X			Х		Х	X			Х			Х		X			
	November-01	X			X		X	X			X			X	.,	X			
	February-02	X			X		X	X			X			X	X	X			
	June-02	X			X		X	X			X			X		X			-
	August-02	X			X		X	X			X			X		X			
	November-02	X			X		X	X			X			X		X			
	February-03	X			X									X	Х	X			-
	May-03	X			X		X	X			X			X		X			
	August-03	X						_ X											-
	October-03	X			X		X		X		X			X		X			-
	February-04	X			X		X		X		X			X		X			-
	June-04	X			X		X		X		X			X		X			
	August-04	X									X								
	November-04	Х			Х		X		Х		X			Х	1	X	1		1

Sampling	svoc	SVOC	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
LW7S April-97	Х			Х		Х	Х			Х			Х	Х				
July-97	Х			Х		Х	Х			X			Х	Х				
October-97	Х			Х		Х	Х			Х			Х	Х				
January-98	Х			Х		Х	Х			X			Х	Х				
May-98	Х			Х		Х	Х			Х			Х		Х			
August-98	Χ			Х		X	Х			Х			Х		Х			
November-98	Х			Х		Х	Х			Х			Х		Х			
February-99	Χ	Х		Х		X	Х			Х			Х	Х	Х			
May-99	Χ			Х		Х	Х			Х			Х		X			
September-99	Х			Х		Х	Х			Х			Х		Х			
December-99	Χ			Х		X	Х			Х			Х		X			
February-00	Х			Х		Х	Х			Х			Х	Х	Х			
May-00	Х			Х		X	Х			Х			Х		Х			
August-00	Х			Х		Х	Х			Х			Х		Х			
November-00	Х			Х		Х	Х			Х			Х		Х			
February-01	Х			Х		Х	Х			Х			Х	Х	Х			
June-01	Х			Х		Х	Х			Х			Х		Х			
August-01	Х			Х		Х	Х			Х			Х		Х			
November-01	Х			Х		Х	Х			Х			Χ		Х			
February-02	Х			Х		Х	Х			Х			Х	Х	X			
June-02	Х			Х		Х	Х			X			Х		X			
August-02	Х			Х		Х	Х			Х			Х		Х			
November-02	Χ			Х		Х	Х			X			Х		X			
February-03	Χ			Х		Х	Х			X			Х	Х	Х			
May-03	Х			Х		Х	Х			Х			Х		X			
August-03	Х			Х		Х	Х			Х			Χ		Х			
October-03	Х		Х	Х		Х		Х	X	Х			Х		Х			
February-04	Х		Х	Х	Х	Х		Х	X	Х			Х		X			
June-04	Х		Х	Х	Х	Х		Х	Х	Х								
August-04	Х		X	Х	Х	X		Х	Х	Х			Х		Х			
November-04	Х		Х	Х	Х	Х		Χ	Х	Х			Х		Х			
LW8S May-99	Х			Х		Х	Х	Х	Х	Х			Х		Х			
September-99	Х			Х		Х	Х	Х	Х	Х			Х		Х			
December-99 (a,b	Χ			Х		Х	Х	Х	Х	Х			Х		Х			
February-00	Χ			Х		Х	Х	Χ	Х	Х			Х	Х	Х			
May-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			Х
August-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			Х
November-00	Х			Х		Х	Х	Х	Х	Х			Х		X			Х
February-01	Χ			Х		Х	Х	Χ	Х	Х			Χ	Х	Х			Х
June-01	Х			Х		Х	Х	Х	Х	X			Х		Х			
August-01	Х			Х		Х	Х	Х	Х	Х			Х		Х			
November-01	Х			Х		X	Х	Х	Х	X			Х		Х			
February-02	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
June-02	Х			Х		Х	Х	Х	Х	Х			Х		Х			
August-02	Х			Х		Х	Х	Х	Х	Х			Х		Х			
November-02	Х			Х		Х	Х	Х	Х	Х			Х		Х			
February-03	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
May-03	Х			Х		Х	Х	Х	Х	Х			Х		Х			
August-03	Х			Х		Х	Х	Χ	Х	Х			Х		Х			
October-03	Х			Х		Х		Χ	Х	Х			Х		Х			
February-04	Х			Х		Х		Х	Х	Х			Х		Х			
June-04	Х			Х		Х		Χ	Х	X								
August-04	Х			Х		Х		Х	Х	Х			Х		Х			
November-04	Х			Х		Х		Х	Х	Х			Х		Х			

Well	Sampling Date	SVOC 8270	SVOC SIM	PAH (8270 SIM)	VOC 8260	MTBE 8260	PCP 8040/8270	TPH-D	TPH-Dx	TPH-Gx	PP Metals 6010/7000	Ferrous Iron (MS3500)	Selenium (6010)	TDS	Major Ions	Chloride	PCBs 8081	Dioxin/ Furans	Ethano
LW9S	May-99	Х			Х		Х	Х			Х			Х		Х			
	,																		
LW9D	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Х					
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			X			Х		Х			
	August-00	Х			Х		Х	Х			Х			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х	Х			X			Х		Х			
	August-01	Х			Х		Х	Х			Х			Х		Х			
	November-01	Х			Х		Х	Х			Х			Х		Х			
	February-02	Х			Х		Х	Х			Х			Χ	Х	Х			
	June-02	Х			Х		Х	Х			Х			Х		Х			
	August-02	Х			Х		Х	Х			Х			Χ		Х			
	November-02	Х			Х		Х	Х			Х			Х		Х			
	February-03	Х			Х		Х	Х			Х			Х	Х	Х			
	May-03	Х			Х		X	Х			Х			Х		X			
	August-03	Х			Х		Х	Х			Х			Х		Х			
	October-03	Х			Х		Х		Х		Х			Х		Х			
	February-04	Х			Х		Х		Х		Х			Х		Х			
	June-04	Х			Х		Х		Х		Х			Х		Х			
	August-04	Х			Х		Х		Х		Х			Х		Х			
	November-04	Х			Х		X		Х		Х			Х		Х			
LW10S	May-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	November-01	Χ			Х		X	Х			Х			Χ		Х			
	February-02	Χ			Х		X	Х			Х			Χ	Х	X			
	June-02	Χ			Х		X	Х			Х			Х		X			
	February-03	Χ			Х		X	Х			Х			Χ	Х	X			
	May-03	Χ			Х		X	Х			X			Х		Х			
	October-03	Х			Х		X		Х		Х			Χ		Х			
	February-04	Х			Х		X		Х		Х			Х		Х			
	June-04						X												
LW10D	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Х		Х			
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			Х			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			X		Х	Х			Х			Χ		Х			
	August-01	Х			Х		Х	Х			Х			Х		Х			
	November-01	Х			Х		Х	Х			Х			Χ		Х			
	February-02	Х			Х		Х	Х			Х			Χ	Х	Х			
	June-02	Х			Х		Х	Х			Х			Х		Х			
	August-02	Х			Х		Х	Х			Х			Х		Х			
	November-02	Х			X	_	Х	Х		_	X			Х		X	_		1

	Sampling	svoc	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
	May-03	Х			Х		Х	Х			Х			Х		Х			
	August-03	Х			Х		Х	Х			Х			Х		Х			
	October-03	Х			Х		Х		Х		Х			Х		Х			
	February-04	X			X		X		X		X			X		X			
	June-04	X			X		X		X		X			X		X			
	August-04	Х			X		X		X		X			X		X			
	November-04	X			X		X		X		X			X		X			
LW11S	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	Х			Х		X	Х			Х			Х		Х		Х	
	December-99 (a,b	Х			Х		Х	Х			Х			Х		Х		Х	
	February-00	Х			Х		Х	Х			Х			Х	Х	Х		Х	Х
	May-00	Х			Х		Х	Х	Х	Х	X			Х		Х			Х
	August-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			Х
	February-01	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			Х
	June-01	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	February-02	Х			Х		Х	Х	Х	Х	X			Х	Х	Х			
	June-02	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	August-02	X			X		X	X	X	X	X			X		X			
	November-02	X			X		X	X	X	X	X			X		X			
	February-03	X			X		X	X	X	X	X			X	Х	X			
	May-03	X			X		X	X	X	X	X			X		X			
	August-03	X			X		X	X	X	X	X			X		X			
	October-03	X			X		X	^	X	X	X			X		X			
	February-04	X			X		X		X	X	X			X		X			
	June-04	X			X		^		^	^	X	X	X			^			
	August-04	X			X						X	X	X	X		Х			
	November-04	X			X						X	X	X	X		X			
LW11D	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	Х			Х		X	Х			Х			Х		Х			
	December-99	Х			Х		X	Х			X			Х		Х			
	February-00	Χ			Х		X	Х			Х			Χ	X	X			
	May-00	Χ			Х		X	Х			Х			Х		X			
	August-00	Χ			Х		Х	Х			X			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Χ			Х		Х	Х			Х			Х	Х	Х			
	June-01	Χ			Х		Х	Х			Х			Х		Х			
	August-01	Х			Х		Х	Х			Х			Х		Х			
	November-01	Х			Х		Х	Х			Х			Х		Х			
	February-02	Х			Х		Х	Х			Х			Х	Х	Х			
	June-02	Х			Х		Х	Х			Х			Х		Х			
	August-02	Х			Х		Х	Х			Х			Х		Х			
	November-02	Х			Х		Х	Х			Х			Х		Х			
	February-03	X			X		X	X			X			X	Х	X			
	May-03	X			X		X	X			X			X		X			
	August-03	X			X		X	X			X			X		X			
	October-03	X			X		X		Х		X			X		X			
		X			X		X		X		X			×		X			
	February-04				X		X		X		X			X		X			
	February-04	Y					^		^		X	X	Х						
	August-04	X			Y									X		1 X			
		X			Х						^	^	^	Х		Х			
I \\//1?\\\/1	August-04 November-04	Х					v	V				^	^						
LW12D1*	August-04				X X X		X	X			X	^	^	X		X			

	Sampling	svoc	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Х			Х		Х	Х			Х			Х		Х			
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х	X			Х			Х		X			
	August-01	Х			X		X	X			X			X		X			
	November-01	Х			Х		Х	X			Х			Х		X			-
	February-02 June-02	Х			X		X	Х			X			X	Х	X			
	June-02	Х			Х		Х	Х			Х			Х		X			
LW12D2*	May-99	Х			Х		Х	Х			Х			Х		Х			
	September-99	Х			Х		Х	Х			Х			Х		Х			
	December-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	May-00	Х			Х		Х	Х			Х			Х		Х			
	August-00	Χ			Х		X	Χ			Х			Х		X			i
	November-00	Х			Х		Х	Х			Х			Х		Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	June-01	Х			Х		Х	Х			Х			Х		Х			
	August-01	Χ			Х		Х	Х			Х			Х		X			
	November-01	Х			X		X	X			X			Х		X			
	February-02	Х			Х		Х	Х			Х			Х	Х	X			-
	June-02	Χ			Х		Х	Х			Х			Х		Х			
LW-13S	February-04						Х												
	August-04						Х												
	November-04	Х			Х				Х		Χ	X	Х	Χ		Х			
LW-14D	February-04						X												
LVV-14D	August-04						X												
	August-04						^												
LW-16D	August-04						Х												
LW-17D	February-04						Х												
	August-04						X												
	November-04						X		Х	Х									
LW-18D	February-04						X												
-VV-10D	August-04						X												
	November-04						X		X	Х									
	.1010111001204														-				

Well	Sampling Date	SVOC 8270	SVOC SIM	PAH (8270 SIM)	VOC 8260	MTBE 8260	PCP 8040/8270	TPH-D	TPH-Dx	TPH-Gx	PP Metals 6010/7000	Ferrous Iron (MS3500)	Selenium (6010)	TDS	Major Ions	Chloride	PCBs 8081	Dioxin/ Furans	Ethano
RW1	May-99	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
	September-99	Х			Х		Х	Х	X	Х	Х			Х		Х			
	December-99	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	February-00	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			Х
	May-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			Х
	August-00	Χ			Х		X	Χ	Х	X	Х			Х		X			Х
	November-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			Х
	February-01	Х			Х		Х	Х	Х	Х	Χ			Х	Х	Х			Х
	June-01	Χ			Х		Х	Х	Х	Х	Х			Χ		X			
	August-01	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	November-01	Χ			Х		Х	Χ	Х	X	Х			Х		X			
	February-02	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
	June-02	Х			Х		Х	Х	Х	Х	Х			Х		X			
	August-02	Х			Х		Х	Χ	Х	Х	Х			Х		Х			
	November-02	Х			Х		X	Х	Х	Х	Х			Х		X			
	February-03	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
	May-03	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	August-03	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	October-03	Х			Х		X		X	X	X			Х		X			
	February-04	Χ			Х		X		Х	X	X			Χ		X			
	June-04	Χ			Х						Х	Х	X					Χ	
	August-04	Х			Х		X		Х	Х	Χ	Х	X	Х		X		Х	
	November-04	Χ			Х						Х	Х	Х	Χ		Х		Х	
RW2	May-99	Х			Х		Х	Х	Х	Х	X			Х	Х	Х			
	September-99	Х			Х		Х	Х	X	X	X			Х		X			
	December-99	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	February-00	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
	May-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	August-00	Х			Х		X	Х	Х	X	Х			Х		Х			
	November-00	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	February-01	Х			Х		X	Х	X	X	Х			Х	Х	Х			
	June-01	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	August-01	Х			Х		Х	Х	Х	Х	Х			Х		Х			
	November-01	Х			Х		Х	Х	Х	X	Х			Х		Х			
	February-02	Х			Х		Х	Х	Х	X	X			Х	Х	X			
	June-02	Х			Х		Х	Х	X	Х	Х			Х		Х			
	August-02	Χ			Х		Х	Х	Χ	Х	Х			Χ		Х			
	November-02	Х			Х		Х	Х	Χ	Х	Х			Х		Х			
	February-03	Х			Х		Х	Х	Х	Х	Х			Х	Х	Х			
	May-03	Χ			Х		Х	Х	Χ	Х	Х			Χ		Х			
	August-03	Х			Х		Х	Х	Χ	Х	Х			Х		Х			
	October-03	Χ			Х		Х		Х	Х	Х			Χ		Х			
	February-04	Х			Х		Х		Х	Х	X			Х		Х			
	June-04	Х			Х		Х		Х	Х	Х			Х		Х			
	August-04	Х			Х		Х		Х	Х	Х			Х		Х			
	November-04	Х			Х		Х		Х	Х	Х			Х		Х			
RW3*	December-99 (b)	Х			Х		X	Х	Х	Х	Х			Х	Х	Х			Х
_W101S*	April-97	Х			X		X	X			X			Х	X			X	
-**1013	July-97	X			X		X	X			X			X	X			X	
	October-97	X			X		X	X			X			X	X			X	
	January-98	X			X		X	X			X			X	X			X	
	May-98	^			_ ^		^	^			^		i l	^	_ ^	I	I	^	

	Sampling	SVOC	SVOC	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
	August-98																		
	November-98																		
	February-99		Х								Х								
	May-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	February-01	Х			Х		X	X			Х			Х	X	Х			
	February-02	Х			Х		Х	Х			Х			Х	X	X			
	February-03	Χ			Х		Х	Х			Х			Х	Х	Х			
LW102S*	April-97	X			Х		X	X			X			X	X			X	
LVV1023	July-97	X			X		X	X			X			X	X			X	-
	October-97	X			X		X	X			X			X	X			X	
	January-98	X			X		X	X			X			X	X			X	
	May-98										X								-
	August-98																		
	November-98																		
	February-99										Х								
	May-99	Х			Х		Х	Х			X			Х		Х			
	February-00	X			X		X	X			X			X	Х	X			
	February-01	X			X		X	X			X			X	X	X			
	February-02	X			X		X	X			X			X	X	X			
	February-03	X			X		X	X			X			X	X	X			
	. caraary co															7.			
LW103S*	April-97	Х			Х		Х	Х			Х			Х	Х				
	July-97	Х			Х		Х	Х			Х				Х				
	October-97	Х			Х		Х	Х			Х			Х	Х				
	January-98	Х			Х		Х	Х			Х			Х	Х				
	May-98										X								
	August-98																		
	November-98																		
	February-99										Х								
	May-99	Х			Х		Х	Х			X			Х		Х			
	February-00	Х			Х		Х	Х			X			Х	Х	Х			
	February-01	Х			Х		Х	Х			X			Х	Х	Х			
	February-02	Х			Х		Х	Х			Х			Х	Х	Х			
	February-03	Χ			Х		Х	Х			X			Х	Х	Х			
LW104S*	April-97	Χ			Х		Х	Х			Х			Χ	Х				
	July-97	Х			Х		Х	Х			Х				Х				
	October-97	Х			Х		Х	Х			X			Х	Х				
	January-98	Χ			Х		Х	Х			Х			Χ	Х				
	May-98										Х								
	August-98																		
	November-98																		
	February-99										Х								
	May-99	Х			Х		Х	Х			Х			Х		Х			
	February-00	Х			Х		Х	Х			Х			Х	Х	Х			
	February-01	Х			Х		Х	Х			Х			Х	Х	Х			
	February-02	Х			Х		Х	Х			Х			Х	Х	Х			
	February-03	Х			Х		Х	Х			Х			Х	Х	X			

	Sampling	svoc	svoc	PAH	VOC	мтве	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethanol
OX1S	June-02				X						Х			Х					
	February-03						Х												
	May-03						Х												
	August-03						Х												
	October-03						Х												
	February-04						Х												
	June-04	Х			Х						X	Х	Х						
	August-04	Х			Х						Х	Х	Х						
OX2S	June-02				Х						X			Х					
0,40	February-03						Х												
	May-03						X												
	August-03						X												
	October-03						X												
	February-04						X												
	June-04	Х			Х							Х	Х					Х	
	August-04	X			X						Х							X	
	November-04	X			X						X	Х	Х	Х		Х		X	
	November-04	^									^	^	^			^			
OX3S	June-02				Х						Х			Х					
	February-03						Х												
	May-03						X												
	August-03						X												1
	October-03						X												
	February-04						X												
	June-04	Χ			Χ						Х	Х	Х						
	August-04	Х			Х						Х	Х	Х						
OX4S	June-02				Х						Х			Х					
0,43	February-03						X				^								
	May-03						X												
	August-03						X												
	October-03						X												
	February-04						X												
	June-04	Х			Х		^				Х	X	Х						
	August-04	X			X						X	X	X						
	August-04										^	^	^						
OX5S	October-03						Х												
	February-04						Х												
	June-04	Х			Х						Х	Х	Х						
	August-04	Х			Х						Х								
	November-04	Χ			Х						Х	Х	Х	Х		Х			
OX6S	October-03						X												
0,000	February-04						X												
	June-04	Х			Х						Х	Х	Х					Х	
	August-04	X			X						X		,					X	
	November-04	X			X						X	X	Х	Х		Х		X	
OX7S	October-03						X												
	February-04						Х												
	June-04	Χ			Χ						Х	Х	Х						
	August-04	Χ			Х						Х	Х	Х						
	November-04	Χ			Х						Х	Х	Х	Х		Х			1

	Sampling	svoc	svoc	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethano
OX8D	October-03						X												-
CAOD	February-04						X												
	August-04	~			Х		X					X	Х						-
	November-04	X			X		^				X	X	X	Х		Х			
	November-04				^						^	^				^			
OX8S	October-03						Х												
	February-04						X												
	June-04	Х			Х						Х	Х	Х						
	August-04	Х			Х						Х	Х	Х						
	November-04	Х			Х						Х	X	Х	Х		Х			
OX-9S	August-04	Х			X						X	X	X						
LW19S	October-03	Х		X	X				Х	Х	X			Х		Х			
	February-04	Х		Х	Х	Х			Х	Х	Х								
	June-04	Х		Х	Х	Х			Х	Х									
	August-04	Х		Х	Х	Х			Х	Х	X			Х		X			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW20D	October-03	Х		Х	X				Х	Х	X			Х		X			
LTTLOD	February-04	X		X	X	Х			X	X	X			X		X			-
	June-04	X		X	X	X			X	X	X			X		X			-
	August-04	X		X	X	X			X	X	X			X		X			
	November-04	X		X	X	X			X	X	X			X		X			
LW20S	October-03	Х		Х	Х				Х	Х	Х			Х		Х			
	February-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	June-04	Х		Х	Х	Х			Х	Х	Х								
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	X	Х			Х		Х			
LW21S	October-03	Х		Х	X				Х	Х	Х			Х		X			
	February-04	X		X	X	Х			X	X	X			X		X			
LW22D	October-03	Χ		Х	Χ				Х	X	X			Х		X			
	February-04	Χ		Х	Х	Х			Х	Х	Х			Х		X			
	June-04	Χ		Х	Х	Х			Х	Х	Х			Х		Х			
	August-04	Χ		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW23D	October-03	Х		Х	Х				X	X	X			Х		X			
_**200	February-04	X		X	X	Х			X	X	X			X		X			+
	June-04	X		X	X	X			X	X	X			X		X			
	August-04	X		X	X	X			X	X	X			X		X			
	November-04	X		X	X	X			X	X	X			X		X			
LW24D	October-03	Х		Х	Х				Х	Х	X			Х		Х			
	February-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	June-04	Х		Х	Χ	Х			Х	Х	Х			Х		Х			
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Χ		Х	X	Х			Х	X	X			Х		X			

	Sampling	svoc	svoc	PAH	VOC	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethanol
LW25D	October-03	Х		Х	Х				Χ	Х	Х			Х		Х			
	February-04	Х		X	Х	Х			X	Х	Х			Х		Х			
	June-04	Х		Х	Х	Х			X	Х	Х			Х		Х			
	August-04	Χ		X	Х	Х			X	Х	Χ			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW26D	October-03	Х		Х	Х				Х	Х	Х			Х		Х			
	February-04	Х		Х	Х	Х			X	Х	Х			Х		Х			
	June-04	Х		X	Х	Х			X	Х	X			Х		Х			
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW27D	October-03	Х		X	Х				X	X	X			Х		Х			
	February-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	June-04	Х		X	Х	X			Х	Х	Х			Х		Х			
	August-04	Х		X	Х	Х			Х	Х	Х			Х		Х			
	November-04	Χ		Х	Х	Х			Х	Х	Х			Χ		Х			
LW27S	October-03	Х		Х	Х				X	X	Х			Х		X			
	February-04	X		X	X	Х			X	X	X			X		X			
	June-04	X		X	X	X			X	X	X								
LW28S ( c)	October-03																		
211200 (0)	February-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	June-04	X		X	X	X			X	X	X								
LW29D	October-03	Х		X	Х				Х	X	X			Х		X			
LVVZSD	February-04	X		X	X	Х			X	X	X			X		X			
	June-04	X		X	X	X			X	X	X			X		X			
	August-04	X		X	X	X			X	X	X			X		X			
	November-04	X		X	X	X			X	X	X			X		X			
LW29S	October-03	Х		X	Х				Х	X	X			Х		X			
LVVZSO	February-04	X		X	X	X			X	X	X			X		X			
	June-04	X		X	X	X			X	X	X								
	August-04	X		X	X	X			X	X	X			X		Х			
	November-04	X		X	X	X			X	X	X			X		X			
LW30D	October-03	Х		Х	Х				Х	Х	X			Х		Х			
	February-04	Χ		Х	Х	Х			Х	Х	X			Х		Х			
	June-04	Х		X	Х	Х			Х	Х	X			Χ		Х			
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Χ		Х			
LW30S	October-03	Х		X	Х				X	X	X			Х		X			
	February-04	Х		Х	Х	Х			Χ	Х	Х			Х		Х			
	June-04	Х		Х	Х	Х			Х	Х	Х								
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		X	Х	Х			Х	Х	Х			Х		Х			
LW31S	October-03	Х		Х	Х				X	X	X			Х		X			
	February-04	Х		X	Х	Х			X	X	X			Х		Х			
	June-04	Х		X	Х	X			X	X	X								
	August-04	Х		X	Х	X			X	X	X			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			

	Sampling	svoc	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethanol
LW32D	October-03	Х		X	Х				Х	X	Х			Х		X			
LVVOZD	February-04	X		X	X	X			X	X	X			X		X			
	June-04	X		X	X	X			X	X	X			X		X			
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Χ		Х			
LW32S	October-03	Х		X	Х				Х	X	X			Х		X			
	February-04	Х		X	Х				X	Х	X			Х		Х			
	June-04	Х		Х	Х	Х			Х	Х	Х								
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW33S ( c)	October-03																		
	February-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	June-04	Х		Х	Х	Х			Х	Х	Х								
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04																		
LW34S	October-03	Х		X	Х				X	X	Х			Х		X			
	February-04	Х		Х	Х	Х			Х	Χ	Х			Х		Х			
	June-04	Х		Х	Х	Х			Х	Х	Х								
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Χ		Х			
LW35D	October-03	Х		X	Х				Х	Х	Х			Х		Х			
	February-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	June-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW36D	November-04	Х		X	Х	Х			Х	Х	X			Х		Х			
LW37D	November-04	Х		X	Х	X			X	X	Х			Х		X			
LW38D	November-04	Х		X	Х	X			X	X	X			Х		X			
LVAROD	Navarah as O4	V		V	V	V			V	V	V			V		V			
LW39D	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW40S	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW40D	November-04	Х		X	Х	Х			Х	Х	Х			Х		Х			
LW41S	November-04	Х		X	Х	Х			Х	X	Х			Х		X			
LW42S	November-04	Х		Х	Х	X			Х	X	Х			Х		Х			
LW43S	November-04	Х		X	Х	Х			Х	X	Х			Х		Х			
LW44S	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
LW45D	November-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
N	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			

# BZTO104(e)022980

	Sampling	SVOC	svoc	PAH	voc	MTBE	PCP				PP Metals	Ferrous Iron	Selenium		Major		PCBs	Dioxin/	
															-				
Well	Date	8270	SIM	(8270 SIM)	8260	8260	8040/8270	TPH-D	TPH-Dx	TPH-Gx	6010/7000	(MS3500)	(6010)	TDS	lons	Chloride	8081	Furans	Ethanol
Q	August-04	Х		Х	Х	Х			Х	Х	Х			Х		Х			
HRW-1	February-04						Х												
	June-04						Х												
	August-04						Х												
	November-04						Х												
SDM-1	August-04						X												
	November-04						Х												
River Outfall	August-04						X												

- (a) In addition to the quarterly groundwater sampling, additional groundwater samples were taken on 11/1/99 and analyzed for chlorinated phenols, BTEX, and ethanol.
- (b) In addition to the quarterly groundwater sampling, additional groundwater samples were taken on 12/8/99 and analyzed for ethanol.
- (c) Monitoring wells were dry and not sampled as part of the first Phase III RI sampling event.
- (\*) Monitoring well location abandoned

#### TABLE 2-2 SUMMARY OF MODIFICATIONS TO QUARTERLY GROUNDWATER ANALYSIS PROGRAM TIME OIL NORTHWEST TERMINAL

#### · Second Quarter 1998:

- Annual sampling of east property wells LW-101S, LW-102S, LW-103S, and LW-104S
- Elimination of 2-chloroethylvinylether from the volatile analyte list
- Reduction of the suite of metals analyses to include only arsenic, chromium, copper, lead, nickel, and zinc
- Quarterly analysis of only metals in well K and only chlorinated phenols and metals in well H
- Elimination of polychlorinated biphenyls (PCB) analysis
- Annual analysis for major ions; quarterly analysis for chloride and dissolved oxygen.

#### • First Quarter 1999:

- Analysis of polynuclear aromatic hydrocarbons (PAH) using analytical techniques that provide lower detection limits at upper zone wells LW-2S, LW-7S and LW-101S and at lower zone wells G1A, O, and LW-4D for the first quarter 1999 event only
- Elimination of sampling at well J3.

#### • Second Quarter 2000:

Elimination of dioxin/furan analyses.

#### Third Quarter 2000::

Reduction of sampling frequency of wells H, L, and LW-5S from quarterly to annually.

#### Second Quarter 2001:

- Reduction of the list of chlorinated phenols being analyzed by U.S. Environmental Protection Agency (EPA) Method 8040 to pentachlorophenol (PCP) only using EPA Method 8270 SIM
- Reduction of the frequency of total petroleum hydrocarbon (TPH) analysis from quarterly to annually at upper zone wells J1 and LW-1S; lower zone wells B2, J2, LW-1D; and deep sand unit well LW-12D2. In addition, TPH analysis was eliminated for the following wells: upper zone wells D, L, LW-5S, LW-101S through -104S, and lower zone well LW-3D.
- First Quarter 2004 (Landau Associates 2004; Roick 2004):
  - Elimination of eight wells from the Phase II sampling program for future events. These wells included five upper zone wells (H, K, L, LW-1S, and LW-5S), and three lower zone wells (O, R, LW-1D).
  - Reduction of the monitoring frequency for selected Phase II wells from quarterly to semiannually. These wells include: B1, B2, D, J1, J2, LW-3D, LW-4S, LW-4D, LW-11S, LW-11D, LW-13S, LW-14D, LW-17D, LW-18D, OX-1S through OX-8S, OX-8D, and RW-1. Semiannual sampling of these wells will be conducted in conjunction with the first and third quarter sampling of the Phase III wells.

#### TABLE 2-3 GROUNDWATER INTERIM ACTION OPERATIONAL HISTORY UPPER AND LOWER WATER-BEARING ZONES TIME OIL NORTHWEST TERMINAL

Page 1 of 3

		RW-2 I	Discharge			HRW-10	Discharge			SDM-1 E	Discharge		Trea	tment System Disci	harge	I
Monitoring Period	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Treated (gal)	Sample Date	Discharge PCP Concentration (µg/L)	Comments
Fourth Quarter 2000 October 2000 November 2000 December 2000	439,003 305,601 348,720	11/9/2000 12/20/2000	95 39	0.35 0.24 0.11									0 467,478 497,656	11/7/2000 12/6/2000 12/20/2000	ND (a) 5.89 9.73	Mass removal calculated using November 2000 PCP concentration.
Quarterly Totals	1,093,324			0.70									965,134			
First Quarter 2001 January 2001 February 2001 March 2001	416,140 335,008 332,963	1/18/2001 2/13/2001 3/7/2001	38.8 30 ND (b)	0.13 0.08 0.03									239,207 184,192 517,332	1/18/2001 3/7/2001	14.3 ND (b)	
Quarterly Totals	1,084,111			0.25									940,731			
Second Quarter 2001 April 2001 May 2001 June 2001 Quarterly Totals	377,931 344,252 361,846 1,084,029	5/22/2001 6/4/2001	12.3 0.68	0.04 0.04 0.00									275,519 195,522 563,853 1,034,894	5/22/2001	5.29	Mass removal calculated using May 2001 PCP concentration.
Third Quarter 2001	1,004,020			0.00									7,004,004			
July 2001 August 2001	351,509 486,123	8/13/2001	5	0.01 0.02									559,015 66,876			Mass removal calculated using August 2001 PCP concentration.
Quarterly Totals	837,632			0.03									625,891			
Fourth Quarter 2001 October 2001 November 2001 December 2001	393,168 319,798 361,058	10/11/2001	ND (a)	0.01 0.01 0.01									484,158 118,786 717,769	10/11/2001 11/1 & 11/15/01 12/6/2001	ND (a) ND (a) ND (c)	Mass removal calculated using December 2001 PCP concentration.
Quarterly Totals	1,074,024			0.02									1,320,713			
First Quarter 2002 January 2002	331,224			0.02	1,812			0.01					340,688			Recovered groundwater from HRW-1 from January 22-29. Re-initiated groundwater recovery from HRW-1 on February 28.
February 2002	282,480	2/27/2002	8.6	0.02	58			0.00					437,943			HRW-1 mass removal estimates for January and February are based on the Mard
March 2002	280,814			0.02	40,294	3/12/2002	786	0.26					234,816			12 sampling event.  RW-2 mass removal estimates for January and March are based on February 27 sampling event.
Quarterly Totals	894,518			0.06	42,164			0.28					1,013,447			
Second Quarter 2002 April 2002	292,099			0.19	74,996	4/5/2002	94	0.06					391,263	4/5/02 4/22/02	34.4 9.33	RW-2 mass removal estimates for April and May are based on June 27 sampling event.
May 2002 June 2002	310,584 272,393	6/27/2002	76	0.20 0.17	23,427 25,484	5/29/2002 6/25/2002	452 410	0.09 0.09					247,440 307,810	7/22/02	0.55	C C C C C C C C C C C C C C C C C C C
Quarterly Totals	875,076			0.56	123,907			0.23					946,513			
Third Quarter 2002 July 2002	272,771			0.08	51,111			0.18					188,300	7/24/2002	2.09	
August 2002	270,746	8/27/2002	36	0.08	7								301,613	8/20/2002	9.15	HRW-1 shut down on July 24 due to dry pumping conditions and potential biofouling of the well. HRW-1 mass removal rate estimate based on June 2002 data.
September 2002	143,662			0.04					110,000	9/23/2002	47.0		369,469	9/23/2002	11.8	RW-2 temporarily shut down on September 25.
Quarterly Totals	687,179				51,118				110,000		47.0		859,382			Water being intercepted from SDM-1 and pumped to treatment system beginning on September 16. RW-2 mass removal rates based on August 27 sampling event. Total Volume pumped from SDM-1 estimated based on throughout of WWTP and volume recovered from RW-2, Flowmeter to be installed for SDM-1 in October 2002.
Fourth Quarter 2002 October 2002	177,937			0.06	0				Not metered				112,129	10/3/2002	8.84	
November 2002 December 2002	275,033 418,846	11/13/2002	37	0.13	0				95,157 124,894				399,747 507,766			The storage tank gauge was moved to groundwater sump SDM-1 on November 1
Quarterly Totals	871,816			0.27	0				220,051				1,019,642			RW-2 mass removal rates based on November 13 sampling event.

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#### Page 2 of 3

#### TABLE 2-3 GROUNDWATER INTERIM ACTION OPERATIONAL HISTORY UPPER AND LOWER WATER-BEARING ZONES TIME OIL NORTHWEST TERMINAL

		RW-2 I	Discharge			HRW-10	Discharge			SDM-1 E	Discharge		Trea	tment System Disc	harge	
Monitoring Period	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (μg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (μg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Treated (gal)	Sample Date	Discharge PCP Concentration (µg/L)	Comments
First Quarter 2003 January 2003 February 2003 March 2003	417,646 398,299 458,160	2/11/2003	33	0.12 0.11 0.13	0				166,663 192,395 210,400	2/13/2003	290	0.40 0.47 0.51	574,451 483,579 624,807	1/15/2003	11.6	SDM-1 mass removal rates based on February 13 sampling event.
Quarterly Totals	1,274,105			0.35	0				569,458			1.38	1,682,837			RW-2 mass removal rates based on February 11 sampling event.
Second Quarter 2003 April 2003 May 2003 June 2003	445,275 455,994 385,658	5/7/2003	12	0.04 0.05 0.04	0 0 4,175	Not Analyzed			55,037 0 89,243	5/7/2003	0.93	0.00 0.00 0.00	481,816 489,079 446,127	4/9/2003	22.2	RW-2 mass removal rates based on April 8, 2003 sampling event.
Quarterly Totals	1,286,927			0.13	4,175				144,280			0.00	1,397,022			
Third Quarter 2003																
July 2003	330,738	7/28/2003	<5.0	0.01	30,104	7/28/2003	370	0.09	128,562	7/28/2003	409	0.44	441,023	7/11/2003	87.4	Multiple treatment system discharge samples collected and analyzed due to upse
														7/30/2003	8.6	concentration (87.4 ug/L) reported for July 11, 2003 sampling event. Additional discharge samples in response to request from City of Portland.
August 2003	366,307	8/27/2003	10	0.03	7,388			0.02	119,831	8/27/2003	120	0.12	397,748	8/4/2003 8/6/2003 8/11/2003 8/13/2003 8/18/2003 8/20/2003 8/25/2003 8/27/2003	<5.0 <5.0 <4.76 <4.83 <4.75 <5.16 23.8 36.5	HRW-1 mass removal rates based on July 28 sampling event.  SDM-1 mass removal rates based on July 28 sampling event.  RW-2 mass removal rates based on August 27 sampling event.
September 2003	262,403			0.02	0			0.00	87,439			0.09	479,703	9/3/2003 9/5/2003 9/9/2003 9/23/2003 9/29/2003	19.3 19.6 7.09 16.9 5.96	
Quarterly Totals	959,448			0.07	37,492			0.12	335,832			0.65	1,318,474			
Fourth Quarter 2003																
October 2003	298,092	10/23/2003	8.1	0.02					74,025	10/20/2003	43	0.03	350,921	10/6/2003 10/13/2003 10/20/2003 10/30/2003	<4.75 <4.76 <4.84 <5.19	Multiple treatment system discharge samples collected and analyzed due to upse concentration (87.4 ugft.) reported for July 11, 2003 sampling event. Additional discharge samples in response to request from City of Portland.
November 2003	216,630			0.01					45,472			0.02	216,711	11/3/2003 11/10/2003 11/17/2003 11/21/2003	<4.73 <4.78 <4.84 <4.79	SDM-1 mass removal rates based on October 20 sampling event. RW-2 mass removal rates based on October 23 sampling event.
December 2003	367,462			0.02					95,504			0.03	488,055	12/1/2003 12/15/2003 12/29/2003	<4.79 <4.92 30.4	
Quarterly Totals	882,184			0.06					215,001			0.08	1,055,687			
First Quarter 2004 January 2004	348,926	2/23/2004	8.69	0.03					141,282	2/23/2004	791	0.93	367,831	1/15/2004 1/23/2004 1/26/2004	32.1 45.7 31.9	
February 2004	267,665			0.02					197,525			1.31	321,085	2/19/2004	57.2	
March 2004	246,667			0.02					17,825			0.12	197,621	3/2/2004 3/4/2004 3/16/2004 3/19/2004 3/24/2004 3/26/2004	112 48.5 113 85.9 6.23 7.07	Multiple treatment system discharge samples collected due to upset
Quarterly Totals	863,258			0.06					356,632			2.36	886,537			

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# TABLE 2-3 GROUNDWATER INTERIM ACTION OPERATIONAL HISTORY UPPER AND LOWER WATER-BEARING ZONES TIME OIL NORTHWEST TERMINAL

		RW-2 E	Discharge			HRW-1 D	Discharge			SDM-1 E	Discharge		Treat	ment System Disc	harge	
Monitoring Period	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Pumped (gal)	Sample Date	PCP Concentration (µg/L)	Estimated PCP Mass Removal (lb)	Volume of Water Treated (gal)	Sample Date	Discharge PCP Concentration (µg/L)	Comments
Second Quarter 2004 April 2004	190,512	6/9/2004	47.3	0.08	0	6/9/2004	278	0.00					315,554	4/22/2004	194	
May 2004	87,481			0.03	3,624			0.01	146	6/9/2004	595	0.001	242,530	5/19/2004 5/27/2004	39.3 5.81	SDM-1 flow meter replaced May 28, 2004
June 2004	168,615			0.07	6,681			0.02	44,155			0.22	263,730	6/3/2004 6/9/2004 6/15/2004	ND 7.55 8.78	
Quarterly Totals	446,608			0.18	10,305			0.02	44,301			0.22	821,814			
Third Quarter 2004 July 2004	210,710	8/5/2004	13.5	0.02	0	8/5/2004	16.6	0.00	58,561	8/5/2004	158	0.08	343,028	7/7/2004	37.5	
August 2004	299,000			0.03	1,700			0.0002	56,900			0.08	667,190	8/10/2004	ND	
September 2004	329,619			0.04	719			0.0001	36,500			0.05	348,620	9/17/2004 9/30/2004	ND ND	
Quarterly Totals	839,329			0.09	2,419			0.00	151,961			0.20	1,358,828			
Fourth Quarter 2004 October 2004	226,975	11/9/2004	2.12	0.004	62	11/11/2004	ND (d)	0	30,347	11/11/2004	1.61	0.0004	137,056			
November 2004	290,700			0.01	0			0.0000	42,400			0.001	395,562	11/10/2004 11/19/2004	ND ND	
December 2004	391,500			0.01	1,200			0	65,000			0.001	470,334	12/17/2004	6.92	
Quarterly Totals	909,175			0.02	1,262			0.00	137,747			0.00	1,002,952			
Grand Totals	15,962,743			2.94	272,842			0.6519	2,285,263			4.8840	18,250,498			

ND = Not Detected.

(a) PCP not detected above the detection limit of 5 µg/L, concentration-dependent calculations based on half the detection limit, (b) PCP not detected above the detection limit of 25 µg/L, concentration-dependent calculations based on half the detection limit of 25 µg/L, concentration-dependent calculations based on half the detection limit of 52 §g/L, concentration-dependent calculations based on half the detection limit of 0.47 µg/L.

#### TABLE 2-4 SUMMARY OF STORM DRAIN MANHOLE LOCATION ANALYTICAL RESULTS TIME OIL NORTHWEST TERMINAL

				TOTAL PETRO	DLEUM HYDROCA	RBONS (a)		1
		Date	Gasoline	Mineral Spirits	Kerosene	Diesel	Lube Oil	PENTACHLOROPHENOL
Location	Lab ID	Collected	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(µglL)
SDM-1	0109005-02	9/4/2001	0.250 U	0.250 U	0.630 U	0.630 U	0.630 U	11.5
	0111183-02	11/30/2001	NA	NA	NA	0.250 U	0.500 U	0.700
	ED34K	2/28/2002	NA	NA	NA	0.3	0.50 U	100
	EG43A	4/5/2002	NA	NA	NA	NA	NA	82
	EN01A	6/27/2002	NA	NA	NA	NA	NA	190
	ES04I	8/28/2002	NA	NA	NA	NA	NA	25
	FU31G	8/27/2003	NA	NA	NA	NA	NA	120
	FY64A	10/20/2003	NA	NA	NA	NA	NA	43
	0402113-12	2/23/2004	NA	NA	NA	NA	NA	791
	0405022-07	5/4/2004	NA	NA	NA	NA	NA	1000
	0406059-04	6/9/2004	NA	NA	NA	NA	NA	595
	0408036-10	8/5/2004	NA	NA	NA	NA	NA	158
	0411066-13	11/11/2004	NA	NA	NA	NA	NA	1.61
SDM-2	0109005-01	9/4/2001	0.250 U	0.250 U	0.630 U	0.630 U	0.630 U	0.500 U
	0111183-01	11/30/2001	NA	NA	NA	0.261	0.500 U	0.500 U
	ED34L	2/28/2002	NA	NA	NA	0.25 U	0.50 U	0.46
	EN01B	6/27/2002	NA	NA	NA	NA	NA	0.25 U
	ES04J	8/28/2002	NA	NA	NA	NA	NA	0.30 U
	FY64B	10/20/2003	NA	NA	NA	NA	NA	0.79
RIVER OUTFALL	0210111-01	10/16/2002	NA	NA	NA	NA	NA	5 U
	0408057-01	8/9/2004	NA	NA	NA	NA	NA	0.507 U

U = Indicates compound was analyzed for, but was not detected at the reported sample detection limit.

NA = Not Analyzed

<sup>(</sup>a) Samples collected in September, 2001 were analyzed using total petroleum hydrocarbon (TPH) method, NWTPH-HCID. Samples collected in November 2001 were analyzed using NWTPH-Dx.

#### TABLE 2-5 SUMMARY OF POTENTIALLY IMPACTED AREAS PHASE III PRELIMINARY EVALUATION TIME OIL NORTHWEST TERMINAL

Potentially Impacted Area (a)	Description
B1	Area identified by Time Oil personnel as the location of the cargo pump area that contained the pumps used to distribute product throughout the terminal.
B2 and B6	Historical aerial photographs dating back to the mid-1950s indicate that a building was formerly located in each of these areas. Operations within these buildings are not known.
B3 and B14	Locations of the former loading racks where petroleum products were transferred from the Main tank farm and Bell Terminal tank farm to trucks.
B4	Three underground storage tanks (USTs), which reportedly contained leaded and unleaded fuel, and the associated pump dispensers were formerly located in this area. The tanks were removed in April 1990 and soil along the excavation sidewalls was removed to about 6 to 8 ft BGS.
B5	A 4,000-gallon heating oil tank was removed from this area in 1990. The heating tank was about 4 to 5 years old and no evidence of leaking was reported. Samples collected from the base of the excavation for field screening using a PID and sheen tests showed no evidence of contamination.
B7	An active railroad car loading rack was formerly located in this area.
B8	Location of two aboveground tanks formerly used for storage of aviation fuel.
В9	Long, thin, rectangular objects reported to be refining towers by Time Oil personnel were observed in this area in aerial photographs from 1966 and 1971. In addition, tanks were observed on their sides in this area in the 1971 aerial photograph.
B10	Area formerly used to store old tanks and refining towers.
B11	In a 1971 aerial photograph, dark staining was observed along the roadways in this area. Soil will be remediated in these areas as part of the east property remedial action (Landau Associates 2001b).
B12	Approximate area potentially impacted by a diesel spill in 1979. The spill was due to a split in Tank 29508.
B13	Location of a former UST and pump dispenser. An earlier UST was replaced with a new fiberglass tank in about 1990. The fiberglass tank and pump dispenser were removed in 2001.
B15	Aerial photographs dating back to 1958 indicate that a loading rack was formerly located in this area.
B16	Location of a former ballast stockpile from road construction.
B17	Location of a former gasoline spill.

<sup>(</sup>a) Potentially impacted areas are also referred to as Phase III preliminary evaluation biased sampling areas.

Sample Identificati Laboratory Identificati	ion: SCH56-9-10 ion: 0110066-01	SCH56-15-15.5 0110065-3	GP-BLT-0-15-56 K2107502-001	GP-BLT-15-57 K2107502-004	SCH58-17-18 0110066-02
Date Collect		10/9/2001	10/9/2001	10/9/2001	10/9/2001
TOTAL PETROLEUM					
HYDROCARBONS (mg/kg)					
NWTPH-HCID					
Gasoline	NA	<b>8750</b> J	NA	NA	NA
Diesel	NA	13200 J	NA	NA	NA
NWTPH-Dx					
Diesel	17.2 U	<b>12700</b> J	18,000	15,000	18.5 L
NWTPH-G					
Gasoline	2.87 U	NA	1,000	750	3.09 ل
PAHs (mg/kg) EPA Method SW8270					
2-Methylnapthalene	NA	l NA	31	78	NA
Acenaphthene	NA.	1.6	0.84	2.3	l NA
Acenaphthylene	NA NA	0.511	0.0061 U	0.0056 U	NA NA
Anthracene	NA	1.05	0.29	0.460	NA NA
Benzo(a)anthracene	NA	0.02	0.0078	0.015	l NA
Benzo(a)pyrene	NA	0.00667 U	0.0061 U	0.0056 U	NA NA
Benzo(b)fluoranthene	NA	0.00667 U	0.0061 U	0.0056 U	NA NA
Benzo(g,h,i)perylene	NA	0.00667 U	0.0061 U	0.0056 U	l NA
Benzo(k)fluoranthene	NA	0.00667 U	0.0061 U	0.0056 U	NA NA
Chrysene	NA	0.02	0.023	0.062	NA NA
Dibenzofuran	NA	NA NA	0.470	0.680	NA NA
Dibenz(a,h)anthracene	NA	0.00667 U	0.0061 U	0.0056 U	NA NA
Fluoranthene	NA	0.196	0.07	0.120	NA
Fluorene	NA	6.52	2.9	5.9	NA.
ndeno(1,2,3-cd)pyrene	NA	0.00667 U	0.0061 U	0.0056 U	NA NA
Naphthalene	NA	16.6	10	11	NA NA
Phenanthrene	NA	10.3	6	12	NA.
Pyrene	NA	0.465	0.13	0.260	NA.
VOLATILES (mg/kg)					
EPA Method SW8260					
1,1,1,2-Tetrachloroethane	NA	<b>0.0245</b> J	0.61 U	0.12 U	NA
1,1,2-Trichloroethane	NA	<b>0.224</b> J	0.61 U	0.12 U	NA
1,2,4-Trimethylbenzene	NA	0.133 J	2.5 U	4.0	NA
1,3,5-Trimethylbenzene	NA	0.1 UJ	2.5 U	0.46	NA
1,3-Dichloropropane	NA	0.0169 J	0.61 U		
4-Isopropyltoluene	NA	<b>0.24</b> J	2.5 U	1.4	NA
Acetone	NA	0.0351 J	25 U	4.5 U	NA
Bromoform	NA	0.126 J	0.61 U	0.12 U	NA
Dibromochloromethane	NA	0.0319 J	0.61 U	0.12 U	NA
Ethylbenzene	NA	0.01 UJ	0.61 U		NA
Isopropylbenzene	NA	<b>5.5</b> J	7.1	5	NA
m,p-Xylene	NA	0.02 UJ	0.61 U		
Methyl Iodide	NA	0.001 UJ	0.61 U		l .
n-Butylbenzene	NA	7.56 J	16	9.4	NA
n-Propylbenzene	NA	29.3 J	34	16	NA
Naphthalene	NA	21.8 J	37	30	NA.
sec-Butylbenzene	NA	4.18 J	6.3	5.6	NA.
Styrene	NA	0.0318 J	0.61 U		
tert-Butylbenzene	NA	0.329 J	2.5 U		
Toluene	NA	0.01 UJ	0.61 U		

Date Collected:  TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-HCID Gasoline Diesel  NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(c)k)fluoranthene Chrysene	0110066-03 10/9/2001 NA NA 10,200 1,410 NA 1.3 0,408 0,594	NA NA NA 11,000 630	0110065-1 10/9/2001 3230 J 4270 J 5650 J	NA NA 1,500	0110065-2 10/9/2001 4620 J 6120 J 9,070 J
TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-HCID Gasoline Diesel  NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(b,fluoranthene Chrysene	NA NA 10,200 1,410 NA 1.3 0.408	NA NA <b>11,000</b> <b>630</b> 0.0055 U	3230 J 4270 J 5650 J	NA NA <b>1,500</b>	4620 J 6120 J 9,070 J
HYDROCARBONS (mg/kg) NWTPH-HCID Gasoline Diesel  NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHS (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthene Acenaphthylene Anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,hi)perylene Benzo(k)fluoranthene Chrysene	NA 10,200 1,410 NA 1.3 0.408	NA 11,000 630 0.0055 U	<b>4270</b> J <b>5650</b> J	NA <b>1,500</b>	6120 J 9,070 J
NWTPH-HCID Gasoline Diesel  NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(b,h,i)perylene Benzo(b)fluoranthene Chrysene	NA 10,200 1,410 NA 1.3 0.408	NA 11,000 630 0.0055 U	<b>4270</b> J <b>5650</b> J	NA <b>1,500</b>	<b>6120</b> J <b>9,070</b> J
Gasoline Diesel  NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(b)fluoranthene Chrysene	NA 10,200 1,410 NA 1.3 0.408	NA 11,000 630 0.0055 U	<b>4270</b> J <b>5650</b> J	NA <b>1,500</b>	<b>6120</b> J <b>9,070</b> J
Diesel  NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,hi)perylene Benzo(k)fluoranthene Chrysene	NA 10,200 1,410 NA 1.3 0.408	NA 11,000 630 0.0055 U	<b>4270</b> J <b>5650</b> J	NA <b>1,500</b>	<b>6120</b> J <b>9,070</b> J
NWTPH-Dx Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,hi)perylene Benzo(k)fluoranthene Chrysene	10,200 1,410 NA 1.3 0.408	<b>11,000</b> <b>630</b> 0.0055 U	<b>5650</b> J	1,500	<b>9,070</b> J
Diesel  NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(b,h;l)perylene Benzo(k)fluoranthene Chrysene	1,410 NA 1.3 0.408	<b>630</b> 0.0055 U		·	
NWTPH-G Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	1,410 NA 1.3 0.408	<b>630</b> 0.0055 U		·	
Gasoline  PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,hi)perylene Benzo(k)fluoranthene Chrysene	NA 1.3 0.408	0.0055 U	NA	130	NA
PAHs (mg/kg) EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g, h, i)perylene Benzo(k)fluoranthene Chrysene	NA 1.3 0.408	0.0055 U	NA	130	NA
EPA Method SW8270 2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(k)fluoranthene Chrysene	1.3 0.408				1
2-Methylnapthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b,h,i)perylene Benzo(k)fluoranthene Chrysene	1.3 0.408				
Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene	1.3 0.408				
Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(b,h,i)perylene Benzo(k)fluoranthene Chrysene	0.408	0.97	NA	26	NA
Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene			0.845	0.47	0.474
Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	0.594	0.0055 U	0.209	0.0066 U	0.146
Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene		0.28	0.352	0.19	0.367
Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	0.0122	0.0097	0.0365	0.069	0.0266
Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	0.00667 U	0.0055 U	0.0244	0.059	0.011
Benzo(k)fluoranthene Chrysene	0.00667 U	0.0055 U	0.0228	0.052	0.0113
Chrysene	0.00667 U	0.0055 U	0.0119	0.029	0.00869
· ·	0.00667 U	0.0055 U	0.00692	0.022	0.00667 U
	0.0166	0.033	0.0261	0.073	0.0194
Dibenzofuran		0.64		0.350	
Dibenz(a,h)anthracene	0.00667 U	0.0055 U	0.00667 U	0.0066 U	0.00667 U
Fluoranthene	0.0898	0.072	0.0861	0.14	0.0885
Fluorene	4.99	3.50	2.69	1.1	1.89
Indeno(1,2,3-cd)pyrene	0.00667 U	0.0055 U	0.00808	0.028	0.00667 U
Naphthalene	0.462	0.47	2.49	1.40	0.16
Phenanthrene	7.9	6.9	3.77	3.40	4.11
Pyrene	0.298	0.210	0.153	0.2	0.169
VOLATILES (mg/kg)					
EPA Method SW8260					
1,1,1,2-Tetrachloroethane	0.002 U	0.11 U	0.002 U	0.065 U	0.002 U
1,1,2-Trichloroethane	0.002 U	0.11 U	0.002 U	0.065 U	0.002 U
1,2,4-Trimethylbenzene	<b>0.00618</b> J	0.44 U	<b>5.94</b> J	4.5	0.0104
1,3,5-Trimethylbenzene	0.002 U	0.11 U	<b>3.83</b> J	3.7	0.00682
1,3-Dichloropropane	0.002 U	0.11 U	0.002 U	0.065 U	0.002 U
4-Isopropyltoluene	0.002 U	0.44 U	<b>0.552</b> J	0.65	0.001 U
Acetone	21.2 U	4.4 U	0.005 U	2.6 U	0.0974
Bromoform	0.002 U	0.11 U	0.002 U	0.065 U	0.002 U
Dibromochloromethane	0.002 U	0.11 U	0.002 U	0.065 U	0.002 U
Ethylbenzene	0.00538 J	0.11 U	<b>0.0388</b> J	0.065 U	0.00916
Isopropylbenzene	<b>2.16</b> J	1.8	<b>0.866</b> J	0.44	0.231
m,p-Xylene	0.0148 J	0.11 U	0.0503 J	0.065 U	0.0282
Methyl lodide	0.001 U	0.11 U	0.00886 J	0.065 U	0.001 U
n-Butylbenzene	7.22 J	8.0	2.94 J	5.3	5.44
n-Propylbenzene	7.5 J	7.1	3.54 J	2.4	4.74
Naphthalene	0.0568 J	0.44 U	3.57 J	2.0	0.0263
sec-Butylbenzene	3.06 J	3.4	1.09 J	1.1	2.12
Styrene	0.002 U	0.11 U	0.002 U	0.065 U	
tert-Butylbenzene			U.UUZ U		1111177 11
Toluene	0.0211 J	0.44 U	0.001 U	0.26 U	0.002 U <b>0.0108</b>

Sample Identification Laboratory Identification Date Collected	: K2107549-005
TOTAL PETROLEUM	
HYDROCARBONS (mg/kg)	
NWTPH-HCID Gasoline	NA
Diesel	NA
NWTPH-Dx	40.000
Diesel	12,000
NWTPH-G	
Gasoline	790
PAHs (mg/kg)	
EPA Method SW8270	
2-Methylnapthalene	4.80
Acenaphthene	0.870
Acenaphthylene	0.055 U
Anthracene Benzo(a)anthracene	<b>0.330</b> 0.055 U
Benzo(a)pyrene	0.055 U
Benzo(b)fluoranthene	0.055 U
Benzo(g,h,i)perylene	0.055 U
Benzo(k)fluoranthene	0.055 U
Chrysene	0.055 U
Dibenzofuran	1.30
Dibenz(a,h)anthracene	0.055 U
Fluoranthene Fluorene	0.680 2.70
Indeno(1,2,3-cd)pyrene	0.055 U
Naphthalene	0.39
Phenanthrene	5.70
Pyrene	0.170
VOLATILES (mg/kg)	
EPA Method SW8260	
1,1,1,2-Tetrachloroethane	0.11 U
1,1,2-Trichloroethane	0.11 U
1,2,4-Trimethylbenzene	0.44 U
1,3,5-Trimethylbenzene 1,3-Dichloropropane	0.44 U 0.11 U
4-Isopropyltoluene	0.44 U
Acetone	4.4 U
Bromoform	0.11 U
Dibromochloromethane	0.11 U
Ethylbenzene	0.11 U
Isopropylbenzene	1.2
m,p-Xylene Methyl Iodide	0.11 U 0.11 U
n-Butylbenzene	10
n-Propylbenzene	6.9
Naphthalene	0.44 U
sec-Butylbenzene	3.2
Styrene	0.11 U
tert-Butylbenzene	0.44 U
Toluene	0.11 U

Bold indicates value is a detected constituent.

NA = Not analyzed.

U = Indicates compound was analyzed for, but was not detected at the reported detection limit.

J = Data validation flag indicating the analyte was positively identified; the associated numerical value is the approximateconcentration of the analyte in the sample.

Sample   Laboratory   Laboratory   Duplicate ID   Laboratory   Duplicate ID   Duplicate ID   Duplicate ID   Duplicate ID   Sample   Samp	F 201	TOTAL SOLIDS
		⊢
		$\top$
		_
BA1 (14-15)		1
BA2 (1-1.5) 0108172-29 8/22/2001 X X X X		1
BA2 (14-15) 0108172-31 8/22/2001 X X X X X X		1
BA3 (1-1.5) 0108182-01 8/23/2001 X X X X		
BA3 (14-16) 0108182-03 8/23/2001 X X X X X X		
BA4 (1-1.5) 0108182-04 8/23/2001 X X X X X		
BA4 (13-14) 0108182-06 8/23/2001 X X X X X		
BA5 (1-1.5) 0108182-08 8/23/2001 X X X X X		
BA5 (14-15) 0108182-07 8/23/2001 X X X X X		
BA6 (1-1.5) 0108182-10 8/23/2001 X X X X X		
BA6 (10.5-11.5) 0108182-12 8/23/2001 X X X X X		
BA7 (0-0.5) 0108196-20 8/27/2001 X X X X X		
BA7 (1-1.5) 0108196-21 8/27/2001 X X X X X		
BA7 (10.5-11.5) 0108196-23 8/27/2001 X X X X X		
BA8 (0-0.5) 108196-16 8/27/2001 X X X X X X		
BA8 (0-0.5) BA19 (0-0.5) 0108196-15 8/27/2001 X X X X X X		
BA8 (1-1.5) 108196-17 8/27/2001 X X X X X		
BA8 (9-13) 108196-19 8/27/2001 X X X X		
BA9 (0-0.5) 0108182-23 8/23/2001 X X X X X X		
BA9 (1-1.5) 0108182-24 8/23/2001 X X X X		
BA9 (13.5-14.5) 0108182-26 8/23/2001 X X X X		
BA10 (0-0.5)		+
BA10 (1-1.5)		+
BA10 (5.5-7.5) 0108196-14 8/27/2001 X X X X X		
BA11 (0-0.5)		
BA11 (1-1.5) 0108196-09 8/27/2001 X X X X X X X		+
BA11 (5-5.5) 0108196-10 8/27/2001 X X X X X X X X X X X X X X X X X X	_	+
BA11 (6.5-11) 0108196-11 8/27/2001 X X X X X X X X X X X X X X X X X X		+
BA12 (0-0.5)	+	+-
BA12 (0-0.5) 0108151-05 8/20/2001 X X X X X X X X X X X X X X X X X X	+	+
BA12 (11-13) 0108151-08 8/20/2001 X X X X X X X X X X X X X X X X X X	-	+
BA12 (11-13) 0108101-08 8/20/2001 X X X X X X X X X X X X X X X X X X		+

Sample Identification	Duplicate ID	Laboratory Identification	Date Collected	SEMIVOLATILES	PAHs	CHLOROPHENOL/PCP	VOLATILES	HCID	DIESEL	OIL	GASOLINE	METALS	втех	DIOXIN/FURANS	Hd	TOC	TOTAL SOLIDS
BA14 (14-15)		0108208-16	8/28/2001	X			Х	Х				Х					
BA15 (1-1.5)		0108172-22	8/22/2001	X			X	X				X					
BA15 (1-1.5)		0108172-22	8/22/2001	×			X	X				X					
BA15 (1-1.5)	BA18 (1-1.5)	0108172-19	8/22/2001	X			X	X				X					
BA15 (17-18)		0108172-24	8/22/2001	X			Х	Х				Х					
BA16 (0-0.5)		0108172-25	8/22/2001	X			Х	Х	Х			Х					
BA16 (1-1.5)		0108172-26	8/22/2001	Х			Х	Х				Х					
BA16 (16-17)		0108172-28	8/22/2001	Х			Х	Х				Х					
BA17 (0-0.5)		0108182-19	8/23/2001	Х			Х	Х	Х			Х					
BA17 (1-1.5)		0108182-20	8/23/2001	X			Х	Х	Х		Х	Х					
BA17 (12-13)		0108182-22	8/23/2001	Х			Х	Х	Х		Х	Х					
BT-01 (0-0.5)		0207040-01	7/8/2002					Х									
BT-01 (1-2)		0207040-02	7/8/2002					Х									
BT-01 (5-6)		0207040-03	7/8/2002					Х									
BT-01 (9-10)		0207040-04	7/8/2002					Х									
BT-01 (13.5-14.5)		0207040-05	7/8/2002	Χ					Χ	Х	Χ		Χ				
BT-02 (0-0.5)		0207040-08	7/8/2002					Х									
BT-02 (1-2)		0207040-09	7/8/2002					Χ									
BT-02 (5-6)		0207040-010	7/8/2002					Х									
BT-02 (9-10)		0207040-11	7/8/2002					Х									
BT-02 (14-15)		0207040-012	7/8/2002					Х									
BT-03 (0-0.5)		0207040-13	7/8/2002	Χ				Х	Х	Х							
BT-03 (0-0.5)	BT-11(0-0.5)	0207040-06	7/8/2002					Х	Х	Х							
BT-03 (1-2)		0207040-14	7/8/2002					Х									
BT-03 (1-2)	BT-11(1-2)	0207040-07	7/8/2002					Х									
BT-03 (5-6)		0207040-15	7/8/2002					Х									
BT-03 (9-10)		0207040-16	7/8/2002					Х									
BT-04 (0-0.5)		0207059-18	7/9/2002	Χ				Х	Х	Х							
BT-04 (1-2)		0207059-19	7/9/2002					Х									
BT-04 (5-6)		0207059-20	7/9/2002					Х									igwdown
BT-04 (9-10)		0207059-21	7/9/2002	Χ				Х	Х	Х							
BT-04 (12.5-13.5)		0207059-22	7/9/2002					Х									igwdown
BT-05 (0-0.5)		0207040-17	7/8/2002					Х									
BT-05 (1-2)		0207040-18	7/8/2002					Χ									igwdown
BT-05 (5-6)		0207040-19	7/8/2002					Χ									

Sample Identification	Duplicate ID	Laboratory Identification	Date Collected	SEMIVOLATILES	PAHs	CHLOROPHENOL/PCP	VOLATILES	HCID	DIESEL	OIL	GASOLINE	METALS	втех	DIOXIN/FURANS	Hd	TOC	TOTAL SOLIDS
BT-05 (9-10)		0207040-20	7/8/2002					Х									
BT-05 (9-10)		0207040-20	7/8/2002	Х					Х	Х	Х		Х				
BT-06 (0-0.5)		0207059-13	7/9/2002					Х		Λ							$\vdash$
BT-06 (0-0.5)	BT-13 (0-0.5)	0207059-11	7/9/2002					X									
BT-06 (1-2)	B1 10 (0 0:0)	0207059-14	7/9/2002					X									$\vdash$
BT-06 (1-2)	BT-13 (1-2)	0207059-12	7/9/2002					X									
BT-06 (5-6)	D1 10 (1 2)	0207059-15	7/9/2002					X									
BT-06 (9-10)		0207059-16	7/9/2002					X									
BT-06 (14-15)		0207059-17	7/9/2002	Х					Х	Х	Х		Х				
BT-07 (0-0.5)		0207040-22	7/8/2002					Х									
BT-07 (0-0.5)	BT-12 (0-0.5)	0207040-33	7/8/2002					Х									
BT-07 (1-2)	<b> </b>	0207040-23	7/8/2002					Х									
BT-07 (1-2)	BT-12 (1-2)	0207040-34	7/8/2002					Х									
BT-07 (5-6)		0207040-24	7/8/2002					Х									
BT-07 (9-10)		0207040-25	7/8/2002					Х									
BT-07 (12.5-13.5)		0207040-26	7/8/2002					Х									
BT-08 (0-0.5)		0207040-27	7/8/2002	Х				Х	Х	Х							
BT-08 (1-2)		0207040-28	7/8/2002					Х									
BT-08 (5-6)		0207040-29	7/8/2002					Х									
BT-08 (9-10)		0207040-30	7/8/2002					Х									
BT-08 (13.5-14.5)		0207040-31	7/8/2002	Χ					Χ	Х	Χ		Χ				
BT-09 (0-0.5)		0207059-06	7/9/2002					Х									
BT-09 (1-2)		0207059-07	7/9/2002					Χ									
BT-09 (5-6)		0207059-08	7/9/2002					Х									
BT-09 (9-10)		0207059-09	7/9/2002					Х									
BT-09 (13.5-14.5)		0207059-10	7/9/2002					Х									
BT-10 (0-0.5)		0207059-01	7/9/2002					Х									
BT-10 (1-2)		0207059-02	7/9/2002					Х									
BT-10 (5-6)		0207059-03	7/9/2002					Х									
BT-10 (9-10)		0207059-04	7/9/2002					Х									
BT-10 (13.5-14.5)		0207059-05	7/9/2002					Х									
EP-VS015-001 (0-0.5)	1	0208160-19	8/29/2002		Х												
EP-VS015-002 (0-0.5)		0208160-20	8/29/2002		Х												
EP-VSR-001 (0-0.5)		0208160-223	8/29/2002		Х												igsquare
G1 (1-1.5)		0108189-01	8/24/2001	Х			Х	Х				Х					

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G1 (10-13)		0108189-03	8/24/2001	Х			Х	Х	Х			Х					
G2 (0-0.5)		0108151-01	8/20/2001	X			X	X	X			X					
G2 (1-1.5)		0108151-02	8/20/2001	X			Х	Х	X			Х					
G2 (15-21)		0108151-04	8/20/2001	Х			Х	Х	Х		Х	Х					
G2-4 (18.5-19.5)		0207087-02	7/11/2002					Х									
G3 (0-0.5)		0108151-09	8/20/2001	Х			Х	Х	Х			Х					
G3 (1-1.5)		0108151-10	8/20/2001	Х			Х	Х	Х			Х					
G3 (11-15)		0108151-12	8/20/2001	Х			Х	Х	Х		Х	Х					
G4 (1-1.5)		0108182-13	8/23/2001	Х			Х	Х				Х					
G4 (12.5-14)		0108182-15	8/23/2001	Х			Х	Х	Х			Х					
G4 (12.5-14)	G29 (CF)	0108182-16	8/23/2001	Х			Х	Х	Х			Х					
G5 (1-1.5)		0108189-04	8/24/2001	Х			Х	Х				Х					
G5 (10.5-13)		0108189-06	8/24/2001	Χ			Χ	Х				Х					
G6 (0-0.5)		0108189-12	8/24/2001	Χ			Χ	Χ				Χ					
G6 (1-1.5)		0108189-13	8/24/2001	Χ			Χ	Χ				Х					
G6 (8.5-11.5)		0108189-15	8/24/2001	Χ			Χ	Χ				Χ					
G7 (0-0.5)		0108196-01	8/27/2001	Χ			Χ	Х	Χ			Х					
G7 (1-1.5)		0108196-02	8/27/2001	Χ			Χ	Χ				Х					
G7 (6.5-7.5)		0108196-03	8/27/2001	Χ			Х	Х				Х					i
G07-3 (0-0.5)		0309196-18	9/29/2003		Х							Х					
G07-4 (0-0.5)		0309196-21	9/29/2003		Х							Х					
G07-5 (0.0.5)		0309196-24	9/29/2003		Х							Х					
G8 (0-0.5)		0108151-13	8/20/2001	Χ			Х	Х	Χ			Х					
G8 (1-1.5)		0108151-14	8/20/2001	Χ			Х	Х	Х			Х					
G8 (14-24)		0108151-17	8/20/2001	Χ			Х	Х	Х			Χ					
G9 (0-0.5)		0108189-08	8/24/2001	Х			Х	Х	Х			Χ					
G9 (1-1.5)		0108189-09	8/24/2001	Х			Х	Х				Χ					
G9 (1-1.5)	G30 (1-1.5)	0108189-07	8/24/2001	Χ			Х	Х				Х					
G9 (13-15)		0108189-11	8/24/2001	Χ			Х	Х	Х		Х	Х					oxdot
G10 (0-0.5)		0108189-17	8/24/2001	Х			Х	Х				Х					igwdown
G10 (1-1.5)		0108189-18	8/24/2001	Χ			Х	Х				Х					igsquare
G10 (10.5-12)		0108189-20	8/24/2001	Х			Х	Х				Х					igwdown
G10-4 (0-0.5)		0309196-27	9/29/2003		Х							Х					igwdown
G10-4 (1-1.5)		0309196-28	9/29/2003		Х												igwdown
G10-5 (0-0.5)		0309196-44	9/29/2003		Χ							Χ					

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G10-5 (1-1.5)		0309196-45	9/29/2003		Х												$\Box$
G11 (0-0.5)		0108196-04	8/27/2001	Х			Х	Х				Х					
G11 (1-1.5)		0108196-05	8/27/2001	X			X	X				X					
G11 (5.5-6.5)		0108196-06	8/27/2001	X			X	X				X					
G11-3 (0-0.5)		0309196-29	9/29/2003		Х							X					
G11-3 (1-1.5)		0309196-31	9/29/2003		X							X					
G12 (0-0.5)		0108151-18	8/20/2001	Х			Х	Х	Х			X					
G12 (1-1.5)		0108151-19	8/20/2001	Х			Х	X				X					
G12 (13-20)		0108151-21	8/20/2001	X			Х	Х	Х			Х					
G12-3 (17.5-18.5)		0207087-04	7/11/2002					Х									
G13 (0-0.5)		0108172-01	8/21/2001	Х			Х	Х	Х			Х					
G13 (1-1.5)		0108172-02	8/21/2001	Х			Х	Х				Х					
G13 (14-17)		0108172-04	8/21/2001	Х			Х	Х	Х		Х	Х					
G13-4 (14.5-15.5)		0207087-05	7/11/2002	Х					Х	Х	Х		Х				
G14 (0-0.5)		0108172-05	8/21/2001	Х			Х	Х				Х					
G14 (1-1.5)		0108172-06	8/21/2001	Х			Х	Х				Х					
G14 (13-15)		0108172-08	8/21/2001	Х			Х	Х			Х	Х					
G15 (0-0.5)		0108172-44	8/22/2001	Х			Х	Х				Х					
G15 (0-0.5)	G31 (0-0.5)	0108172-40	8/22/2001	Х			Х	Х				Х					
G15 (1-1.5)		0108172-45	8/22/2001	Χ			Χ	Х				Х					
G15 (8-13)		0108172-47	8/22/2001	Χ			Х	Х				Х					
G15-4 (0-0.5)		0309196-38	9/29/2003		Х							Х					
G15-5 (0-0.5)		0309196-10	9/29/2003		Х							Х					
G15-6 (0-0.5)		0309196-35	9/29/2003		Х							Х					
G16 (0-0.5)		0108172-09	8/21/2001	Χ			Х	Х	Х			Х					
G16 (1-1.5)		0108172-10	8/21/2001	Χ			Х	Х				Х					
G16 (5-5.5)		0108172-11	8/21/2001	Х													
G16 (15-18)		0108172-12	8/21/2001	Χ			Х	Х				Х					
G16-GRAB		0108172-13	8/21/2001					Х				Х					igsquare
G17 (0-0.5)		0108172-15	8/21/2001	Χ			Х	Х	Х			Χ					igsquare
G17 (1-1.5)		0108172-16	8/21/2001	Χ			Х	Х				Х					
G17 (13-15)		0108172-18	8/21/2001	Χ			Х	Х				Х					igsquare
G17-4 (0-0.5)		0309196-07	9/29/2003		Х							Х					
G17-5 (0-0.5)		0309196-01	9/29/2003		Х							Х					$ldsymbol{ldsymbol{ldsymbol{eta}}}$
G17-6 (0-0.5)		0309196-04	9/29/2003		Х							Х					

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G18 (0-0.5)		0108172-36	8/22/2001	Х			Х	Х				Х					
G18 (1-1.5)		0108172-37	8/22/2001					X				X					
G18 (12-15)		0108172-39	8/22/2001	Х			Х	X				X					
G19 (0-0.5)		0108172-48	8/22/2001	X			X	X				X					
G19 (1-1.5)		0108172-49	8/22/2001	X			X	X				X					
G19 (9-11)		0108172-51	8/22/2001	X			X	X				X					
G19-3 (0-0.5)		0309196-13	9/29/2003		Х							Х					
G19-4 (0-0.5)		0309196-32	9/29/2003		Х							X					
G19-5 (0-0.5)		0309196-41	9/29/2003		Х							Х					
G20 (0-0.5)		0108208-02	8/28/2001	Х			Х	Х	Х			Х					
G20 (1-1.5)		0108208-03	8/28/2001	Х			Х	Х				Х					
G20 (10.5-14.5)		0108208-05	8/28/2001	Х			Х	Х				Х					
G20 (10.5-14.5)	G28 (CF)	0108208-01	8/28/2001	Х			Х	Х				Х					
G21 (0-0.5)	` ′	0108208-18	8/28/2001	Х			Х	Х	Х			Х					
G21 (1-1.5)		0108208-19	8/28/2001	Х			Х	Х				Х					
G21 (14-17.5)		0108208-21	8/28/2001	Х			Х	Х	Х		Х	Х					
G21-3(13-14)		0207087-01	7/11/2002					Х									
G22 (0-0.5)		0108215-05	8/29/2001	Х			Х	Х				Х					
G22 (1-1.5)		0108215-06	8/29/2001	Χ			Х	Х				Х					
G22 (12.5-15.5)		0108215-08	8/29/2001	Х			Χ	Х	Х			Χ					
G23 (0-0.5)		0108215-01	8/29/2001	Χ			Χ	Х				Х					
G23 (1-1.5)		0108215-02	8/29/2001	Χ			Х	Х				Х					
G23 (9-14)		0108215-04	8/29/2001	Χ			Χ	Χ	Χ			Χ					
G24 (0-0.5)		0108208-06	8/28/2001	Χ			Х	Х	Х			Х					
G24 (1-1.5)		0108208-07	8/28/2001	Χ			Х	Х				Х					
G24 (9-15)		0108208-09	8/28/2001	Χ			Х	Х				Х					
G25 (0-0.5)		0108215-09	8/29/2001	Χ			Х	Х				Х					
G25 (1-1.5)		0108215-10	8/29/2001	Χ			Х	Х				Х					
G25 (14-17)		0108215-12	8/29/2001	Χ			Х	Х				Х					
G2-5 (16-17)		0207087-03	7/11/2002					Х	Х	Х							
G26 (0-0.5)		0108215-13	8/29/2001	Χ			Х	Х				Х					
G26 (1-1.5)		0108215-14	8/29/2001	Χ			Х	Х				Х					
G26 (14-15)		0108215-16	8/29/2001	Χ			Х	Х				Х					
G27 (0-0.5)		0108208-10	8/28/2001	Х			Х	Χ	Х			Х					
G27 (1-1.5)		0108208-11	8/28/2001	Χ			Χ	Χ	Х			Χ					

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G27 (13-15)		0108208-13	8/28/2001	Х			Х	Х	Х			Х					
G27-4 (0-0.5)		0309196-16	9/29/2003		Х			_^_									
G27-5 (0-0.5)		0309196-17	9/29/2003		X												$\overline{}$
HB01 (1-1.5)		0310117-02	10/15/2003		X		Х		Х		Х	Х					
HB01 (5-6)		0310117-03	10/15/2003		Х		Х		Х		Х	Х					
HB01 (10-11)		0310117-04	10/15/2003		Х		Х		Х		X	Х					
HB01 (14-15)		0310117-05	10/15/2003		Х		Х		Х		Х	Х					
HB02 (1-1.5)		0310117-07	10/15/2003		Х		Х		Х		Х	Х					
HB02 (5-6)		0310117-08	10/15/2003		Х		Х		Х		Х	Х					
HB02 (10-11)		0310117-09	10/15/2003		Х		Х		Х		Х	Х					
HB02 (13-14)		0310117-10	10/15/2003		Х		Х		Х		Х	Х					
HB03 (1-1.5)		0310117-21	10/15/2003		Х		Х		Х		Х	Х					
HB03 (5-6)		0310117-22	10/15/2003		Χ		Х		Х		Χ	Х					
HB03 (10-11)		0310117-23	10/15/2003		Х		Χ		Х		Х	Χ					
HB04 (1-1.5)		0310117-16	10/15/2003		Х		Х		Χ		Χ	Х					
HB04 (5-6)		0310117-17	10/15/2003		Χ		Χ		Χ		Χ	Х					
HB04 (10-11)		0310117-18	10/15/2003		Х		Х		Χ		Х	Х					
HB04 (12-13)		0310117-19	10/15/2003		Χ		Χ		Χ		Χ	Х					
HB05 (1-1.5)		0310117-12	10/15/2003		Х		Х		Χ		Χ	Х					i
HB05 (5-6)		0310117-13	10/15/2003		Х		Х		Χ		Χ	Х					
HB05 (10-11)		0310117-14	10/15/2003		Х		Х		Χ		Χ	Х					
LB1(11-12.5)		Q650P	10/23/96			Х		Х									
LB1(15.5-16.5)		Q650Q	10/23/96			Х		Х									
LB2(12-13.5)		Q650S	10/23/96			Х		Х									
LB2(18.5-19.5)		Q650T	10/23/96			Х		Χ									
LB3(12-13.5)		Q650V	10/23/96	Х		Х	Х	Х	Х			Х					
LB3(17-18)		Q650X	10/23/96			Χ		Х									
LB4(12-13.5)		Q650AS	10/25/96			Х		Х						Х			igsquare
LB4(17-18)		Q650AT	10/25/96			Х		Х									igwdown
LB6(12-13.5)		Q650AE	10/23/96	Х		Х	Х	Х				Х					igwdot
LB6(17-18)		Q650AF	10/23/96			Х		Х									igwdown
LB7(12-13.5)		Q650AW	10/25/96			Х		Х									igwdown
LB7(17-18)		Q650AX	10/25/96			Х		Х									$\vdash \vdash \vdash$
LB8(3.5-5.0)		Q650AH	10/24/96			Х		Х									$\vdash \vdash \vdash$
LB8(5-6.2)		Q650AI	10/24/96			Χ		Χ									

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LB10(0.5-2.0)		Q650AL	10/24/96			Х		Х									
LB10(6.5-8.0)		Q650AM	10/24/96			X		X									
LB11 (12.5-14.2)		R923C	03/10/97		Х	Х	Х		Х								
LB11 (17-17.6)		R923D	03/10/97		Х	Х			Х		Х		Х				
LB12 (13.2-14.0)		R923F	03/10/97	Х		Х			Х		Х		Х				
LB12 (15-16)		R923G	03/10/97	Х		Х			Х		Х		Х				
LB13 (12.5-14)		R923I	03/10/97	Х		Х	Х		Х								
LB13 (15-16.5)		R923J	03/10/97	Х		Х	Х		Х								
LB14 (12.5-14.0)		R923M	03/10/97	Х		Х	Х		Х								
LB14 (18-19)		R923N	03/10/97	Х		Х			Х		Х		Х				
LB15 (5-6.5)		R923O	03/10/97		Х	Х			Х		Х		Х				
LB15 (7.5-9.0)		R923P	03/10/97		Х	Х			Х		Х		Х				
LB15 (12.5-14)		R923Q	03/10/97		Χ	Χ			Χ		Χ		Χ				
LB15 (16.5-17.3)		R923R	03/10/97		Χ	Χ			Χ		Χ		Χ				
LB16 (0-0.5)		R923AY	03/12/97	Χ		Χ			Х		Χ	Χ	Χ				
LB16 (5-6.5)		R923AZ	03/12/97		Χ	Χ			Χ		Χ	Χ	Χ				
LB16 (7.5-9.0)		R923BA	03/12/97		Х	Χ			Х		Χ	Χ	Χ				
LB16 (7.5-9.0)	LS7 (27.5-29.0)	R923T	03/12/97		Х	Χ			Х		Χ	Χ	Χ				
LB16 (21-22.5)		R923BB	03/12/97		Х	Х			Х		Х	Х	Х				
LB17 (7.5-9.0)		R923Z	03/11/97	Χ		Χ			Х		Χ	Χ	Х				
LB17 (10-11.5)		R923AA	03/11/97	Χ		Х	Х		Х			Х					
LB17 (18-19.5)		R923AB	03/11/97	Х		Х			Х		Х	Х	Х				
LB18 (7.5-9.0)		R923AD	03/11/97		Х	Х			Х		Х	Х	Х				
LB18 (18-19.5)		R923AE	03/11/97		Х	Х			Х		Х	Х	Х				
LB19 (7.5-9.0)		R923AG	03/11/97		Χ	Х			Х		Х	Х	Х				
LB19 (18.0-20.2)		R923AH	03/11/97		Х	Х			Х		Х	Х	Х				
LB20 (2.5-4.0)		R923AJ	03/11/97		Х	Х			Х		Х	Х	Х				
LB20 (7.5-9.0)		R923AK	03/11/97	Χ		Х			Х		Х	Х	Х				
LB20 (16.3-17.0)		R923AL	03/11/97	Χ		Х			Х		Х	Х	Х				
LB21 (7.5-9.0)		R923AN	03/11/97		Х	Х			Х		Х	Х	Х				
LB21 (15.4-16.4)		R923AO	03/11/97		Х	Х			Х		Х	Х	Х				
LB22 (7.5-9.0)		R923AQ	03/11/97	Х		Х			Х		Х	Х	Х				
LB22 (16.8-17.3)		R923AR	03/11/97	Χ		Х			Х		Х	Х	Х				
LB23 (7.5-9.0)		R923AT	03/11/97		Х	Х			Х		Х	Х	Х				
LB23 (16.7-17.7)		R923AU	03/11/97		Χ	Х			Х		Χ	Х	Χ				

Sample Identification	Duplicate ID	Laboratory Identification	Date Collected	SEMIVOLATILES	PAHs	CHLOROPHENOL/PCP	VOLATILES	HCID	DIESEL	OIL	GASOLINE	METALS	втех	DIOXIN/FURANS	Hd	TOC	TOTAL SOLIDS
LB24 (2.5-4.0)		S057A	03/21/97						Х								
LB24 (7.5-9.0)		S057B	03/21/97						X								
LB24 (12.5-14.0)		S057C	03/21/97						X								
LS1(0-0.5)		Q650A	10/23/96	Х		Х	Х	Х	X			Х					
LS2(0-0.5)		Q650B	10/23/96			X		X									
LW1D (0.0-0.5)		R950O	03/14/97		Х	X			Х		Х		Х				
LW1D (7.5-9.0)		R950P	03/14/97		X	X			X		X		X				
LW1D (7.5-9.0)	LS7 (17.5-19.0)	R950S	03/14/97		X	X			X		X		X				
LW1D (16.5-19.0)	1201 (11:0 10:0)	R950Q	03/14/97		X	X			X		X		X				
LW1D (30-31.5)		S037B	03/17/97		X	X			X		X		X				
LW1S (15-16.50)		R950R	03/14/97						, ,						Х	Х	Х
LW2S (12.5-14.0)		S037P	03/18/97	Х		Х	Х		Х					Х			
LW2S (12.5-14.0)	LS7 (22.5-24.0)	S037R	03/18/97	Х		Х	Х		Х								
LW2S (16.5-17.0)	1	S037Q	03/18/97	Х		Х			Х		Х		Х	Х			
LW3D (7.5-9.0)		S037T	03/18/97		Х	Х			Х		Х	Х	Х				
LW3D (12.5-14.0)		S037U	03/18/97		Х	Х	Х		Х			Х					
LW3D (16.0-17.2)		S037V	03/18/97		Х	Х			Х		Х	Х	Х				
LW3D (24.0-25.5)		S037Z	03/19/97	Х	Х	Х			Х		Х	Х	Х				
LW3D (36.5-39.0)		S037AA	03/19/97	Х	Х	Х			Х			Х	Х				
LW4D (0-0.5)		R950A	03/12/97		Х	Х			Х		Х		Х				
LW4D (31.5-33.0)		R950H	03/13/97		Х	Х			Х		Х		Х				
LW5S (10-11.5)		R923V	03/12/97	Х		Х			Х		Х	Х	Х				
LW5S (16.5-17.2)		R923X	03/12/97	Х		Х			Х		Х	Х	Х				
LW6D (0-0.5)		R950I	03/13/97		Х	Х			Х		Х		Х				
LW6D (15-16.5)		R950J	03/13/97		Χ	Х			Х		Χ		Х				
LW6D (16.5-18.0)		R950K	03/13/97												Χ	Х	Х
LW6D (24.0-25.5)		R950L	03/13/97		Χ	Х					Х		Х				
LW6D (28.5-30.0)		R950M	03/13/97		Х	Х			Χ		Х		Х				
LW7S (0-0.5)		S037C	03/17/97		Х	Х			Х		Х		Х				
LW7S (7.5-9.0)		S037D	03/17/97		Х	Х			Χ		Х		Х				
LW7S (12.5-14.0)		S037E	03/17/97	Χ		Х	Х		Χ								
LW7S (19.5-20.3)		S037F	03/17/97		Х	Χ			Χ		Х		Х				
LW19S (16.5-17.5)		0309195-01	9/29/2003		Х		Χ		Χ		Х	Х					
LW20D (12-13)		0310011-01	9/30/2003		Х		Х		Х		Х	Х					
LW21S (13.5-14.5)		0310149-03	10/21/2003		Х		Χ		Х		Х	Х					

Sample Identification	Duplicate ID	Laboratory Identification	Date Collected	SEMIVOLATILES	PAHs	CHLOROPHENOL/PCP	VOLATILES	НСІБ	DIESEL	OIL	GASOLINE	METALS	втех	DIOXIN/FURANS	됪	TOC	TOTAL SOLIDS
LW22D (24-25)		0309163-04	9/24/2003		Х		Х		Х		Х	Х	Х				=
LW23D (22.5-23.5)		0309163-03	9/24/2003		X		X		X		X	X	X				
LW24D (26-27)		0310149-02	10/20/2003		X		X		X		X	X					
LW25D (28-29)		0310149-01	10/20/2003		X		X		X		X	X					
LW26D (15-16)		0309185-01	9/25/2003		Х		Х		Х		X	X					
LW27S (13.5-14.5)		0309185-02	9/25/2003		X		Х		X		X	X					
LW27S (21-22)		0309185-03	9/25/2003		Х		Х		Х		Х	Х					
LW28S (12-13)		0309163-02	9/23/2003		Х		Х		Х		Х	Х	Х				
LW28S (12-13)		0310011-05	10/1/2003		Х		Х		Х		Х	Х					
LW29D (15-16)		0309163-01	9/22/2003		Х		Х		Х		Х	Х	Х				
LW30S (13.5-14.5)		0309137-01	9/19/2003		Х		Х		Х		Х	Х	Х				
LW31S (15-16)		0310011-06	10/1/2003		Х		Х		Х		Х	Х					
LW32D (13.5-14.5)		0310041-02	10/2/2003		Х		Х		Х		Х	Х					
LW33S (13.5-14.5)		0310041-01	10/2/2003		Х		Х		Χ		Χ	Х					
LW35 (27-28)		0310011-02	10/1/2003		Х		Х		Х		Χ	Х					
LW35 (29-29.5)		0310011-03	10/1/2003		Х		Х		Χ		Χ	Χ					
LW35 (30-31)		0310011-04	10/1/2003		Х		Х		Х		Χ	Х					
LW36D (7-8)		0411033-04	11/2/2004	Χ					Х	Х	Χ	Х					
LW37D (6-7)		0411033-05	11/2/2004	Χ					Х	Х	Х	Х					
LW38D (7-8)		0411033-06	11/2/2004	Х					Х	Х	Χ	Х					
LW39D (5-6)		0411033-07	11/3/2004	Χ					Χ	Χ	Х	Χ					
LW40S (21-21.5)		0411033-02	11/1/2004	Χ					Х	Х	Х	Х					
LW41S (0-0.5)		0410156-02	10/28/2004	Χ					Χ	Х	Χ	Χ					
LW41S (1-105)		0410156-03	10/28/2004	Χ					Х	Х	Χ	Х					
LW41S (16-17)		0410156-05	10/28/2004	Χ					Х	Х	Χ	Х					
LW42S (0-0.5)		0410156-06	10/28/2004	Χ					Х	Х	Χ	Х					
LW42S (1-1.5)		0410156-07	10/28/2004	Χ					Х	Х	Χ	Х					
LW42S (5-5.5)		0410156-08	10/28/2004	Χ					Х	Х							
LW42S (13-14)		0410156-09	10/28/2004	Χ			Х		Χ	Х	Χ	Х					
LW43S (0.05)		0410156-010	10/28/2004	Χ			Х		Χ	Х	Χ	Х					
LW43S (1-1.5)		0410156-011	10/28/2004	Χ			Х		Χ	Х	Х	Х					
LW43S (13-14)		0410156-013	10/28/2004	Χ			Х		Χ	Х	Χ	Х					
LW44S (0-0.5)		0410156-014	10/28/2004	Χ			Х		Χ	Х	Χ	Х					
LW44S (1-1.5)		0410156-015	10/28/2004	Χ			Х		Х	Х	Χ	Х					
LW44S (12.5-13.5)		0410156-017	10/28/2004	Χ			Х		Χ	Х	Χ	Χ					

Sample Identification	Duplicate ID	Laboratory Identification	Date Collected	SEMIVOLATILES	PAHs	CHLOROPHENOL/PCP	VOLATILES	HCID	DIESEL	OIL	GASOLINE	METALS	втех	DIOXIN/FURANS	玉	TOC	TOTAL SOLIDS
LW45D (27-28)		0411033-03	11/1/2004	X					Х	Х	Х	Х					
RA14-02 (0.5-0.75)		0107115-02	7/16/2001		Х												
RA14-03 (0-0.5)		0108077-01	8/7/2001		Х												
RA15-02 (0.5-0.75)		0107115-08	7/16/2001		Χ												
RA15-02 (0-0.5)		0107115-07	7/16/2001		Χ												
RA16-01 (0.5-0.75)		0108145-01	7/16/2001		Х												
RA16-06 (0.0.5)		0107115-11	8/17/2001		Х												
RA16-07 (0-0.5)		0108229-03	8/30/2001		Х												
RW3		12.5-14'	11/22/99														
RW3		15-16.5'	11/22/99														
SCH56 (9-10)		0110066-01	10/9/2001	Χ			Х	Х	Х	Х							
SCH56 (15-15.5)		0110065-3	10/9/2001						Х	Х	Х						
SCH58 (17-18)		0110066-02	10/9/2001						Х	Х	Х						
SCH59(14-18)		0110066-03	10/9/2001	Χ			Х		Х	Х	Х						
SCH61 (15.6-16.4)		0110065-1	10/9/2001	Χ			Х	Х	Χ	Х							
SCH63 (15.7-16.0)		0110065-2	10/9/2001	Χ			Х	Χ	Χ	Х							

	nple Identification: tory Identification: Date Collected:	SCH56-GW 0110064-01 10/9/2001	GP-BLT-S-56 K2107502-002 10/9/2001	GP-BLT-S-57 K2107502-005 10/9/2001	GP-BLT-S-59 K2107502-007 10/9/2001	SCH60-GW 0110064-02 10/9/2001	GP-BLT-S-60 K2107502-008 10/9/2001
TOTAL PETROLEUM HYDROCAR	RBONS						
NWTPH-Dx (mg/L)							
Diesel		1.14	7.5	1.500	4.8	0.250 UJ	0.240 U
Lube Oil		0.500 U	0.480 U	0.490 U	0.630 U	0.500 UJ	0.480 U
NWTPH-G (mg/L)							
Gasoline		1.210	1.300	0.560	0.600	0.100 ∪	0.05 U
SEMIVOLATILES (µg/L)							
EPA Method SW8270							
Napthalene		NA	6.3	3.7	0.066	NA	NA
2-Methylnaphthalene		NA	2.2	13	0.028	NA	NA
Acenaphthylene		NA	0.020 U	0.020 U	0.023 U	NA	NA
Acenaphthene		NA	0.50	0.69	0.097	NA	NA
Dibenzofuran		NA	0.45	0.51	0.058	NA NA	NA
Fluorene		NA	0.80	1.3	0.12	NA	NA
Phenanthrene		NA	0.44	1.9	0.062	NA	NA
Anthracene		NA	0.057	0.11	0.023 U	NA	NA
Fluoranthene		NA	0.038	0.035	0.023 U	NA	NA
Pyrene		NA	0.059	0.050	0.023 U	NA	NA
Benzo(a)anthracene		NA	0.020 U	0.020 U	0.023 U	NA	NA
Chrysene		NA	0.020 U	0.020 U	0.023 U	NA	NA
Benzo(b)fluoranthene		NA	0.020 U	0.020 U	0.023 U	NA	NA
Benzo(k)fluoranthene		NA	0.020 U	0.020 U	0.023 U	NA	NA
Benzo(a)pyrene\		NA	0.020 U	0.020 ∪	0.023 U	NA	NA
Indeno(1,2,3-cd)pyrene		NA	0.020 U	0.020 ∪	0.023 U	NA	NA
Dibenz(a,h)anthracene		NA	0.020 U	0.020 ∪	0.023 U	NA	NA
Benzo(g,h,l,)perylene		NA	0.020 U	0.020 U	0.023 U	NA	NA

	Sample Identification: Laboratory Identification: Date Collected:	SCH56-GW 0110064-01 10/9/2001	GP-BLT-S-56 K2107502-002 10/9/2001	GP-BLT-S-57 K2107502-005 10/9/2001	GP-BLT-S-59 K2107502-007 10/9/2001	SCH60-GW 0110064-02 10/9/2001	GP-BLT-S-60 K2107502-008 10/9/2001
VOLATILES (µg/L)							
Method SW8260B							
1,1,1,2-Tetrachloroethane		0.200 U	0.50 U	0.50 U	0.50 ∪	NA	0.50 U
1,1,1-Trichloroethane		0.200 U	0.50 U	0.50 U	0.50 ∪	NA	0.50 U
1,1,2,2-Tetrachloroethane		0.200 U	0.50 U	0.50 U	0.50 ∪	NA NA	0.50 U
1,1,2-Trichloro-1,2,2-trifluoro	oethane	0.200 U	0.50 U	0.50 U	0.50 ∪	NA NA	0.50 U
1,1,2-Trichloroethane		0.200 U	0.50 U	0.50 U	0.50 ∪	NA NA	0.50 U
1,1-Dichloroethane		0.200 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U
1,1-Dichloroethene		0.200 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U
1,1-Dichloropropene		0.200 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U
1,2,3-Trichlorobenzene		0.500 U	2.0 U	2.0 U	2.0 U	NA	2.0 U
1,2,3-Trichloropropane		0.500 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 U
1,2,4-Trichlorobenzene		0.500 U	2.0 U	2.0 U	2.0 U	NA	2.0 U
1,2,4-Trimethylbenzene		0.540	2.0 U	2.0 U	2.0 U	NA	2.0 U
1,2-Dibromo-3-chloropropar	ne	1.00 U	2.0 U	2.0 U	2.0 U	NA	2.0 U
1,2-Dibromoethane		0.200 U	2.0 U	2.0 U	2.0 U	NA	2.0 U
1,2-Dichlorobenzene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 U
1,2-Dichloroethane		0.200 U	0.50 U	0.50 U	0.50 U	NA	0.50 U
1,2-Dichloropropane		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 U
1,3,5-Trimethylbenzene		0.240	2.0 U	2.0 U	2.0 U	NA	2.0 U
1,3-Dichlorobenzene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA NA	0.50 U
1,3-Dichloropropane		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 U
1,4-Dichlorobenzene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA NA	0.50 U
2,2-Dichloropropane		0.200 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U
2-Butanone		1.00 U	20 U	20 U	20 U	l na	20 U
2-Chlorotoluene		0.200 U	2.0 U	2.0 ∪	2.0 U	l NA	2.0 U
2-Hexanone		1.00 U	20 U	20 U	20 U	NA NA	20 U
4-Chlorotoluene		0.200 U	2.0 U	2.0 U	2.0 U	l NA	2.0 U
4-Isopropyltoluene		0.560	2.0 U	2.0 U	2.0 U	NA	2.0 U
4-Methyl-2-Pentanone		1.00 U	20 U	20 U	20 U	NA NA	20 U
Acetone		1.00 U	20 U	20 U	20 U	NA NA	20 U
Acrolein		5.00 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U
Acrylonitrile		1.00 U	0.50 U	0.50 U	0.50 U	l NA	0.50 U
Benzene		0.210	0.50 U	0.50 U	0.50 U	l NA	0.50 U
Bromobenzene		0.200 U	2.0 U	2.0 U	2.0 U	l NA	2.0 U
Bromochloromethane		0.200 U	0.50 U	0.50 U	0.50 U	l NA	0.50 U
Bromodichloromethane		0.200 U	0.50 U	0.50 U	0.50 U	l NA	0.50 U
Bromoethane		0.200 U	0.50 U	0.50 U	0.50 U	l NA	0.50 U
Bromoform		0.500 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U
Bromomethane		0.200 U	0.50 U	0.50 U	0.50 U	NA NA	0.50 U

	Sample Identification: Laboratory Identification: Date Collected:	SCH56-GW 0110064-01 10/9/2001	GP-BLT-S-56 K2107502-002 10/9/2001	GP-BLT-S-57 K2107502-005 10/9/2001	GP-BLT-S-59 K2107502-007 10/9/2001	SCH60-GW 0110064-02 10/9/2001	GP-BLT-S-60 K2107502-008 10/9/2001
Carbon Disulfide		0.200 U	0.50 U	0.50 U	0.50 U	NA	0.50 U
Carbon tetrachloride		0.200 U	0.50 U	0.50 ∪	0.50 ∪	NA	0.50 ∪
Chlorobenzene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Chloroethane		0.200 U	0.50 U	0.50 U	0.50 U	NA	0.50 ∪
Chloroform		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Chloromethane		0.200 U	0.50 U	0.50 U	0.50 U	NA	0.50 ∪
cis-1,2-Dichloroethene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
cis-1,3-Dichloropropene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Dibromochloromethane		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Dibromomethane		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Ethylbenzene		3.33	3.7	0.50 ∪	0.50 U	NA	0.50 ∪
Hexachlorobutadiene		0.500 U	2.0 U	2.0 U	2.0 U	NA	2.0 ∪
Isopropylbenzene		23.4	31	3.5	13	NA	2.0 ∪
m,p-Xylene		0.400 U	0.84	0.50 U	0.50 U	NA	0.50 ∪
Methyl lodide		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Methylene Chloride		0.300 U	1.0 U	1.0 U	1.0 U	NA	1.0 U
n-Butylbenzene		10.0	14	3.5	6.4	NA	2.0 U
n-Propylbenzene		79.1	130	8.9	31	NA	2.0 U
Naphthalene		39.7	43	13	2.0 U	NA	2.0 ∪
o-Xylene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
sec-Butylbenzene		6.81	8.0	2.4	4.9	NA	2.0 ∪
Styrene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
tert-Butylbenzene		0.560	2.0 U	2.0 U	2.0 U	NA	2.0 U
Tetrachloroethene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
Toluene		0.280	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
trans-1,2-Dichloroethene		0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
trans-1,3-Dichloropropene	1	0.200 U	0.50 U	0.50 ∪	0.50 U	NA	0.50 ∪
trans-1,4-Dichloro-2-buten	e	1.00 U	0.50 U	0.50 U	0.50 ∪	NA	0.50 U
Trichloroethene		0.200 U	0.50 U	0.50 U	0.50 U	NA	0.50 U
Trichlorofluoromethane		0.200 U	0.50 U	0.50 U	0.50 ∪	NA	0.50 U
Vinyl Acetate		0.200 U	0.50 U	0.50 U	0.50 U	NA	0.50 U
Vinyl Chloride		0.0100 U	0.50 U	0.50 U	0.50 U	NA	0.50 U

L	Sample Identification: aboratory Identification: Date Collected:	SCH61-GW 0110064-03 10/9/2001	GP-BLT-S-61 K2107502-010 10/9/2001	SCH62-GW 0110064-04 10/9/2001	GP-BLT-S-62 K2107549-001 10/9/2001	SCH63B-GW 0110079-01 10/10/2001	GP-BLT-S-63 K2107549-004 10/9/2001
TOTAL PETROLEUM HYDR	OCARBONS						
NWTPH-Dx (mg/L)							
Diesel		1.10	2.4	0.966	1.8	<b>796</b> J	530
Lube Oil		0.500 U	0.480 U	0.500 U	0.480 U	10.0 U	49 U
NWTPH-G (mg/L)							
Gasoline		6.02	4.900	0.100 U	0.062	NA	2.6
SEMIVOLATILES (µg/L)							
EPA Method SW8270							
Napthalene		NA	4.2	NA	0.24 U	NA	2.4 U
2-Methylnaphthalene		NA	7.9	NA	0.42	NA	2 U
Acenaphthylene		NA	0.020 U	NA	0.026	NA	0.20 U
Acenaphthene		NA	0.55	NA	0.082	NA	2.0
Dibenzofuran		NA	0.34	NA	0.024	NA	4.4
Fluorene		NA	0.87	NA	0.053	NA	6.5
Phenanthrene		NA	0.55	NA	0.43	NA	19
Anthracene		NA	0.064	NA	0.046	NA	1.6
Fluoranthene		NA	0.069	NA	0.47	NA	1.1
Pyrene		NA	0.077	NA	0.6	NA	2.5
Benzo(a)anthracene		NA	0.020 U	NA	0.13	NA	0.82
Chrysene		NA	0.020 U	NA	0.18	NA	0.89
Benzo(b)fluoranthene		NA	0.020 U	NA	0.19	NA	0.28
Benzo(k)fluoranthene		NA	0.020 U	NA	0.063	NA	0.020 U
Benzo(a)pyrene\		NA	0.020 U	NA	0.16	NA	0.23
Indeno(1,2,3-cd)pyrene		NA	0.020 U	NA	0.15	NA	0.020 U
Dibenz(a,h)anthracene		NA	0.020 U	NA	0.020 U	NA	0.020 U
Benzo(g,h,I,)perylene		NA	0.020 U	NA	0.16	NA	0.020 U

Sample Identification: Laboratory Identification: Date Collected:	SCH61-GW 0110064-03 10/9/2001	GP-BLT-S-61 K2107502-010 10/9/2001	SCH62-GW 0110064-04 10/9/2001	GP-BLT-S-62 K2107549-001 10/9/2001	SCH63B-GW 0110079-01 10/10/2001	GP-BLT-S-63 K2107549-004 10/9/2001
VOLATILES (µg/L)						
Method SW8260B						
1,1,1,2-Tetrachloroethane	0.200 U	0.50 U	NA	0.50 U	l NA	0.50 U
1,1,1-Trichloroethane	0.200 U	0.50 U	NA	0.50 U	l NA	0.50 U
1,1,2,2-Tetrachloroethane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,1,2-Trichloroethane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,1-Dichloroethane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,1-Dichloroethene	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,1-Dichloropropene	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,2,3-Trichlorobenzene	0.500 U	2.0 U	NA	2.0 U	NA NA	2.0 U
1,2,3-Trichloropropane	0.500 U	0.50 U	NA	0.50 U	l NA	0.50 U
1,2,4-Trichlorobenzene	0.500 U	2.0 U	NA	2.0 U	NA NA	2.0 U
1,2,4-Trimethylbenzene	356	36	NA	2.0 U	l NA	2.0 U
1,2-Dibromo-3-chloropropane	1.00 U	2.0 U	NA	2.0 U	NA NA	2.0 U
1,2-Dibromoethane	0.200 U	2.0 U	NA	2.0 U	NA NA	2.0 U
1,2-Dichlorobenzene	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,2-Dichloroethane	0.200 U	0.50 U	NA	0.50 U	l NA	0.50 U
1,2-Dichloropropane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,3,5-Trimethylbenzene	185	22	NA	2.0 U	l NA	2.0 U
1,3-Dichlorobenzene	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,3-Dichloropropane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
1,4-Dichlorobenzene	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
2,2-Dichloropropane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
2-Butanone	1.00 U	20 U	NA	20 U	NA NA	20 U
2-Chlorotoluene	0.200 U	2.0 U	NA	2.0 U	NA NA	2.0 U
2-Hexanone	1.00 U	20 U	NA	20 U	NA NA	20 U
4-Chlorotoluene	0.200 U	2.0 U	NA	2.0 U	NA NA	2.0 U
4-Isopropyltoluene	21.3	2.0 U	NA	2.0 U	NA NA	2.0 U
4-Methyl-2-Pentanone	1.00 U	20 U	NA	20 U	NA NA	20 U
Acetone	1.00 U	20 U	NA	20 U	NA NA	20 U
Acrolein	5.00 U	0.50 U	NA	0.50 U	NA NA	0.50 U
Acrylonitrile	1.00 U	0.50 U	NA	0.50 U	l NA	0.50 U
Benzene	0.270	0.50 U	NA	0.50 U	NA NA	0.50 U
Bromobenzene	0.200 U	2.0 U	NA	2.0 U	NA	2.0 U
Bromochloromethane	0.200 U	0.50 U	NA	0.50 U	l NA	0.50 U
Bromodichloromethane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
Bromoethane	0.200 U	0.50 U	NA	0.50 U	NA NA	0.50 U
Bromoform	0.500 U	0.50 U	NA	0.50 U	NA NA	0.50 U
Bromomethane	0.200 U	0.50 U	NA	0.50 U	NA	0.50 U

	Sample Identification: Laboratory Identification: Date Collected:	SCH61-GW 0110064-03 10/9/2001	GP-BLT-S-61 K2107502-010 10/9/2001	SCH62-GW 0110064-04 10/9/2001	GP-BLT-S-62 K2107549-001 10/9/2001	SCH63B-GW 0110079-01 10/10/2001	GP-BLT-S-63 K2107549-004 10/9/2001
Carbon Disulfide		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Carbon tetrachloride		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Chlorobenzene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
Chloroethane		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Chloroform		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Chloromethane		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
cis-1,2-Dichloroethene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
cis-1,3-Dichloropropene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
Dibromochloromethane		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Dibromomethane		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Ethylbenzene		9.73	0.74	NA	0.50 U	NA	0.50 ∪
Hexachlorobutadiene		0.500 U	2.0 U	NA	2.0 U	NA	2.0 U
Isopropylbenzene		<b>65</b> .8	7.4	NA	2.0 U	NA	23
m,p-Xylene		0.400 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Methyl Iodide		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Methylene Chloride		0.300 U	1.0 U	NA	1.0 U	NA	1.0 U
n-Butylbenzene		72.4	12	NA	2.0 U	NA	16
n-Propylbenzene		191	25	NA	2.0 U	NA	110
Naphthalene		256	17	NA	2.0 U	NA	2.7
o-Xylene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
sec-Butylbenzene		31.5	4.1	NA	2.0 U	NA	9.3
Styrene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
tert-Butylbenzene		0.200 U	2.0 U	NA	2.0 U	NA	2.0 U
Tetrachloroethene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
Toluene		0.970	0.50 U	NA	0.50 U	NA	0.50 U
trans-1,2-Dichloroethene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
trans-1,3-Dichloropropene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
trans-1,4-Dichloro-2-buten	e	1.00 U	0.50 U	NA	0.50 U	NA	0.50 U
Trichloroethene		0.200 U	0.50 U	NA	0.50 U	NA	0.50 U
Trichlorofluoromethane		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Vinyl Acetate		0.200 U	0.50 U	NA	0.50 U	NA	0.50 ∪
Vinyl Chloride		0.0100 U	0.50 U	NA	0.50 U	NA NA	0.50 ∪

Bold indicates value is a detected constituent.

NA = Not analyzed.

U = Indicates compound was analyzed for, but was not detected at the reported detection limit.

UJ = The analyte was not detected in the sample; the reported sample detection limit is an estimate.

J = Data validation flag indicating the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

#### TABLE 6-1 HORIZONTAL HYDRAULIC GRADIENTS UPPER AND LOWER WATER-BEARING ZONES TIME OIL NORTHWEST TERMINAL

	Season	Water Table E	levation (ft, SL)	Difference in Elevation (ft)	Distance Between Locations (a) (ft)	Hydraulic Gradient (ft/ft)
Upper Zone						
North		LW-7S	Р			
October-03	Fall	14.65	13.38	1.27	340	3.74E-03
February-04	Winter	18.09	15.40	2.69	340	7.91E-03
June-04	Spring	16.35	14.28	2.07	340	6.09E-03
August-04	Summer	15.10	13.58	1.52	340	4.47E-03
November-04	Fall	15.57	Dry	NA	NA	NA
					Average	5.55E-03
Central		D	LW-4S			
October-03	Fall	14.50	11.74	2.76	340	8.11E-03
February-04	Winter	18.21	13.77	4.44	340	1.31E-02
June-04	Spring	16.26	13.08	3.18	340	9.35E-03
August-04	Summer	15.02	12.29	2.73	340	8.03E-03
November-04	Fall	14.35	11.71	2.64	340 Average	7.76E-03 9.26E-03
Confining Unit Transition	on	Contour	LW-27S		Average	9.20E-0
October-03	Fall	13.00	5.19	7.81	70	1.12E-01
February-04	Winter	17.00	9.07	7.93	115	6.90E-02
June-04	Spring	15.00	9.33	5.67	165	3.44E-02
August-04	Summer	14.00	6.13	7.87	140	5.62E-02
November-04	Fall	13.00	5.93	7.07	110	6.43E-02
					Average	6.71E-02
South		LW-32S	LW-31S			
October-03	Fall	13.69	12.39	1.30	150	8.67E-03
February-04	Winter	17.12	15.19	1.93	160	1.21E-02
June-04	Spring	15.05	13.59	1.46	165	8.85E-03
August-04	Summer	14.04	13.74	0.30	160	1.87E-03
November-04	Fall	13.67	12.33	1.34	165	8.12E-03
Lower Zone					Average	7.91E-03
North (b)		LW-1D	RIVER			
October-03	Fall	4.80	3.19	1.61	650	2.48E-03
February-04	Winter	8.40	7.24	1.16	640	1.81E-03
June-04	Spring	9.18	8.34	0.84	620	1.35E-03
August-04	Summer	4.81	2.70	2.11	620	3.40E-03
November-04	Fall	5.62	3.48	2.14	630	3.40E-03
					Average	2.49E-03
Central		OX-8D	LW-6D			
October-03	Fall	4.72	4.37	0.35	510	6.86E-04
February-04	Winter	8.32	7.84	0.48	500	9.60E-04
June-04	Spring	9.07	8.94	0.13	500	2.60E-04
August-04	Summer	4.75	4.41	0.34	500	6.80E-04
November-04	Fall	5.59	5.23	0.36	500	7.20E-04
South		Contour	LW-30D		Average	6.61E-04
October-03	Fall	4.60	4.48	0.12	90	1.33E-03
February-04	Winter	8.80	8.51	0.29	250	1.16E-03
June-04	Spring	9.40	8.85	0.55	260	2.12E-03
August-04	Summer	5.40	4.19	1.21	270	4.48E-03
November-04	Fall	6.00	5.05	0.95	215	4.42E-03

<sup>(</sup>a) Distance was estimated along groundwater flow path.

<sup>(</sup>b) Distance from LW-1D to River was estimated from LW-1D to river bank in direction of groundwater flow.

Uppe	er Groundwa	ater Zone	Lowe	r Groundwat	er Zone	<b>Vertic</b> a Vertical	al Gradients Average Vertical
Well	Date	GW Elevation	Well	Date	GW Elevation	Gradient (a)	Gradient
LW1S	03/31/97	21.31	LW1 D	03/31/97	15.60	0.25	
LW1S	07/16/97	19.62	LW1 D	07/16/97	10.66	0.40	
LW1S	10/21/97	16.94	LW1 D	10/21/97	7.02	0.47	
LW1S	01/27/98	19.21	LW1D	01/27/98	11.25	0.36	
LW1S	05/18/98	18.81	LW1D	05/18/98	11.78	0.32	
LW1S	08/17/98	16.29	LW1D	08/17/98	6.49	0.47	
LW1S	11/13/98	15.20	LW1D	11/13/98	5.54	0.48	
LW1S LW1S	02/16/99 05/18/99	21.36 19.04	LW1D LW1D	02/16/99 05/18/99	11.01 11.55	0.45 0.34	
LW1S	09/21/99	15.76	LW1D	09/21/99	5.40	0.54	
LW1S	12/06/99	16.10	LW1D	12/06/99	10.31	0.31	
LW1S	02/16/00	18.54	LW1D	02/16/00	10.15	0.28	
LW1S	05/23/00	17.44	LW1D	05/23/00	9.69	0.36	
LW1S	08/29/00	15.45	LW1D	08/29/00	5.50	0.49	
LW1S	11/09/00	14.70	LW1D	11/09/00	5.33	0.47	
LW1S	02/12/01	15.14	LW1 D	02/12/01	6.08	0.45	
LW1S	06/04/01	15.19	LW1D	06/04/01	5.95	0.46	
LW1S	08/16/01	14.51	LW1 D	08/16/01	4.58	0.50	
LW1S	11/28/01	14.71	LW1D	11/28/01	6.58	0.41	
LW1S	02/27/02	18.65	LW1 D	02/27/02	8.00	0.49	
LW1S	06/27/02	16.70	LW1 D	06/27/02	10.50	0.45	
LW1S	08/26/02	15.49	LW1 D	08/26/02	5.46	0.30	
LW1S	11/12/02	14.24	LW1D	11/12/02	5.40	0.42	
LW1S	02/11/03	17.85	LW1 D	02/11/03	7.20	0.61	
LW1S	05/08/03	18.55	LW1 D	05/08/03	9.40	0.85	
LW1S	08/27/03	15.50	LW1 D	08/27/03	5.91	0.76	
LW1S	10/23/03	14.64	LW1 D	10/23/03	4.80	0.16	
LW1S	02/19/04	18.15	LW1D	02/19/04	8.40	0.71	
LW1S	06/09/04	16.36	LW1D	06/09/04	9.18	0.43	
LW1S	08/10/04	15.10	LW1D	08/10/04	4.81	0.30	0.44
LW1S	11/18/04	14.54	LW1D	11/18/04	5.62	0.15	0.44
_		24.22					
D	03/31/97	21.38	LW3D	03/31/97	11.42	0.36	
D	07/16/97	19.59	LW3D	07/16/97	2.71	0.61	
D	10/21/97	16.77 19.32	LW3D LW3D	10/21/97 01/27/98	7.44	0.35	
D D	01/27/98 05/18/98	17.81	LW3D	05/18/98	9.14 11.59	0.37 0.23	
D	08/17/98	16.21	LW3D	08/17/98	6.18	0.23	
D	11/13/98	15.03	LW3D	11/13/98	5.24	0.38	
D	02/16/99	21.54	LW3D	02/16/99	10.80	0.39	
D	05/18/99	19.04	LW3D	05/18/99	11.38	0.28	
D	09/21/99	15.63	LW3D	09/21/99	5.04	0.41	
D	12/06/99	16.00	LW3D	12/06/99	10.11	0.23	
D	02/16/00	18.54	LW3D	02/16/00	9.82	0.32	
D	05/23/00	17.30	LW3D	05/23/00	9.64	0.29	
D	02/12/01	15.05	LW3D	02/12/01	5.95	0.36	
D	06/04/01	15.09	LW3D	06/04/01	5.71	0.37	
D	08/16/01	14.40	LW3D	08/16/01	4.37	0.40	
D	11/28/01	14.59	LW3D	11/28/01	6.32	0.33	
D	02/27/02	18.67	LW3D	02/27/02	7.67	0.40	
D	06/27/02	16.61	LW3D	06/27/02	10.25	0.24	
D	08/26/02	15.36	LW3D	08/26/02	5.17	0.40	

7/18/2005 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI\_Tb 6-2 Table 6-2

Up	per Groundwa	iter Zone	Low	er Groundwat	er Zone		l Gradients
Well	Date	GW Elevation	Well	Date	GW Elevation	Vertical Gradient (a)	Average Vertical Gradient
	11/12/02	14.08	LW3D	11/12/02	5.23	0.35	
D	02/11/03	17.94	LW3D	02/11/03	6.77	0.41	
D	05/08/03	18.56	LW3D	05/08/03	9.12	0.35	
D	08/27/03	15.44	LW3D	08/27/03	5.70	0.38	
D	10/23/03	14.50	LW3D	10/23/03	4.62	0.39	
D	02/19/04	18.21	LW3D	02/19/04	8.15	0.37	
D	06/09/04	16.26	LW3D	06/09/04	8.98	0.28	
D	08/10/04	15.02	LW3D	08/10/04	4.70	0.40	
D	11/18/04	14.35	LW3D	11/18/04	5.38	0.36	0.36
14	03/31/97	20.68	J2	03/31/97	15.27	0.27	
J1 J1	03/31/97	19.21	J2 J2	03/31/97	10.37	0.27	
J1		19.∠1 16.60	J2 J2		6.63		
J1	10/21/97 01/27/98		J2 J2	10/21/97	10.96	0.52 0.38	
		18.67		01/27/98			
J1	05/18/98	17.43 15.92	J2	05/18/98	11.51	0.30 0.53	
J1	08/17/98		J2	08/17/98	5.95	0.53	
J1	11/13/98	14.93	J2	11/13/98	5.01	0.54	
J1	02/16/99	20.79	J2	02/16/99	10.65	0.50	
J1	05/18/99	18.51	J2	05/18/99	11.25	0.36	
J1	09/21/99	15.34	J2	09/21/99	4.92	0.56	
J1	12/06/99	15.75	J2	12/06/99	10.12	0.30	
J1	02/16/00	18.03	J2	02/16/00	9.76	0.41	
J1	05/23/00	16.92	J2	05/23/00	9.32	0.39	
J1	08/29/00	15.12	J2	08/29/00	4.98	0.55	
J1	11/09/00	14.40	J2	11/09/00	4.99	0.52	
J1	02/12/01	14.83	J2	02/12/01	5.73	0.50	
J1	06/04/01	14.87	J2	06/04/01	5.48	0.51	
J1	08/16/01	14.22	J2	08/16/01	4.08	0.56	
J1	11/28/01	14.47	J2	11/28/01	6.20	0.45	
J1	02/27/02	18.08	J2	02/27/02	7.44	0.53	
J1	06/27/02	16.30	J2	06/27/02	10.17	0.32	
J1	08/26/02	15.19	J2	08/26/02	4.98	0.55	
J1	11/12/02	13.99	J2	11/12/02	5.05	0.50	
J1	02/11/03	17.37	J2	02/11/03	6.70	0.49	
J1	05/08/03	18.05	J2	05/08/03	9.00	0.31	
J1	08/27/03	15.24	J2	08/27/03	5.53	0.46	
J1	10/23/03	14.39	J2	10/23/03	4.47	0.71	
J1	02/19/04	17.82	J2	02/19/04	8.13	0.50	
J1	06/09/04	15.99	J2	06/09/04	8.89	0.34	
J1 J1	08/10/04 11/18/04	14.84 14.25	J2 J2	08/10/04 11/18/04	4.41 5.26	0.54 0.69	0.47
31	11/10/04	14.20	52	11/10/04	3.20	0.09	0.47
LW4S	03/31/97	17.49	LW4D	03/31/97	15.44	0.11	
LW4S	07/16/97	15.60	LW4D	07/16/97	10.74	0.27	
LW4S	10/21/97	13.38	LW4D	10/21/97	7.15	0.37	
LW4S	01/27/98	15.13	LW4D	01/27/98	11.33	0.22	
LW4S	05/18/98	14.18	LW4D	05/18/98	11.63	0.15	
LW4S	08/17/98	12.96	LW4D	08/17/98	6.36	0.40	
LW4S	11/13/98	12.30	LW4D	11/13/98	5.18	0.44	
LW4S	02/16/99	17.16	LW4D	02/16/99	11.38	0.31	
LW4S	05/18/99	14.83	LW4D	05/18/99	11.40	0.20	
LW4S	09/21/99	12.65	LW4D	09/21/99	5.39	0.45	
LW4S	12/06/99	13.18	LW4D	12/06/99	9.96	0.19	
LW4S	02/16/00	14.42	LW4D	02/16/00	9.94	0.26	

7/18/2005 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI\_Tb 6-2 Table 6-2

Uppe	r Groundwa	ter Zone	Lowe	r Groundwate	er Zone		al Gradients
Well	Date	GW Elevation	Well	Date	GW Elevation	Vertical Gradient (a)	Average Vertical Gradient
LW4S	05/23/00	13.55	LW4D	05/23/00	9.62	0.23	
LW4S	08/29/00	12.48	LW4D	08/29/00	5.39	0.44	
LW4S	11/09/00	12.09	LW4D	11/09/00	4.98	0.44	
LW4S	02/12/01	13.18	LW4D	02/12/01	5.46	0.47	
LW4S	06/04/01	12.45	LW4D	06/04/01	5.51	0.43	
LW4S	08/16/01	11.87	LW4D	08/16/01	3.90	0.50	
LW4S	11/28/01	12.42	LW4D	11/28/01	5.76	0.41	
LW4S	02/27/02	14.44	LW4D	02/27/02	7.52	0.40	
LW4S	06/27/02	13.37	LW4D	06/27/02	10.02	0.20	
LW4S	08/26/02	12.58	LW4D	08/26/02	5.15	0.46	
LW4S	11/12/02	11.22	LW4D	11/12/02	4.91	0.41	
LW4S	02/11/03	14.23	LW4D	02/11/03	7.09	0.42	
LW4S	05/08/03	14.51	LW4D	05/08/03	8.96	0.32	
LW4S	08/27/03	12.39	LW4D	08/27/03	5.39	0.43	
LW4S	10/23/03	11.74	LW4D	10/23/03	4.32	0.47	
LW4S	02/19/04	13.77	LW4D	02/19/04	8.03	0.45	
LW4S	06/09/04	13.08	LW4D	06/09/04	8.57	0.26	
LW4S	08/10/04	12.29	LW4D	08/10/04	4.30	0.46	
LW4S	11/18/04	11.71	LW4DR	11/24/04	3.88	0.46	0.36
LW9S	05/18/99	11.46	LW9D	05/18/99	10.96	0.03	
LW9S	09/21/99	dry	LW9D	09/21/99	5.75		
LW9S	12/06/99	11.40	LW9D	12/06/99	9.94	0.10	
LW9S	02/16/00	dry	LW9D	02/16/00	9.81		
LW9S	05/23/00	dry	LW9D	05/23/00	9.83		
LW9S	08/29/00	dry	LW9D	08/29/00	5.62		
LW9S	11/09/00	dry	LW9D	11/09/00	5.02		
LW9S	02/12/01	dry	LW9D	02/12/01	5.85		
LW9S	06/04/01	dry	LW9D	06/04/01	5.83		
LW9S	08/16/01	dry	LW9D	08/16/01	4.41		
LW9S	11/28/01	dry	LW9D	11/28/01	5.58		
LW9S	02/27/02	dry	LW9D	02/27/02	8.01		
LW9S	06/27/02	dry	LW9D	06/27/02	10.60		
LW9S	08/26/02	dry	LW9D	08/26/02	6.08		
LW9S	11/12/02	dry	LW9D	11/12/02	5.25		
LW9S	02/11/03	dry	LW9D	02/11/03	8.95		
LW9S	05/08/03	dry	LW9D	05/08/03	9.33		
LW9S	08/27/03	dry	LW9D	08/27/03	5.48		
LW9S	10/23/03	dry	LW9D	10/23/03	4.76		
LW9S	02/19/04	dry	LW9D	02/19/04	8.43		
LW9S	06/09/04	dry	LW9D	06/09/04	9.07		
LW9S	08/10/04	dry	LW9D	08/10/04	5.44		
LW9S	11/18/04	dry	LW9D	11/18/04	5.62		0.07
LW10S	05/18/99	13.51	LW10D	05/18/99	11.30	0.14	
LW10S	09/21/99	11.62	LW10D	09/21/99	5.31	0.44	
LW10S	12/06/99	12.21	LW10D	12/06/99	9.94	0.15	
LW10S	02/16/00	13.13	LW10D	02/16/00	9.92	0.21	
LW10S	05/23/00	12.50	LW10D	05/23/00	9.61	0.19	
LW10S	08/29/00	dry	LW10D	08/29/00	5.26		
LW10S	11/09/00	dry	LW10D	11/09/00	4.86		
LW10S	02/12/01	dry	LW10D	02/12/01	5.49		
LW10S	06/04/01	dry	LW10D	06/04/01	5.50		
LW10S	08/16/01	dry	LW10D	08/16/01	3.96		

7/18/2005 \\Edmdata\\wproc\231\009\132\\PhiIII RI 071905\\PhiIII RI\_Tb 6-2 Table 6-2

Uppe	r Groundwa	ter Zone	Lower	Groundwat	er Zone		al Gradients
Well	Date	GW Elevation	Well	Date	GW Elevation	Vertical Gradient (a)	Average Vertical Gradient
LW10S	11/28/01	dry	LW10D	11/28/01	5.66		
LW10S	02/27/02	12.98	LW10D	02/27/02	7.54	0.36	
LW10S	06/27/02	12.48	LW10D	06/27/02	10.09	0.16	
LW10S	08/26/02	dry	LW10D	08/26/02	5.21		
LW10S	11/12/02	dry	LW10D	11/12/02	4.95		
LW10S	02/11/03	13.25	LW10D	02/11/03	7.29	0.39	
LW10S	05/08/03	13.07	LW10D	05/08/03	9.02	0.27	
LW10S	08/27/03	dry	LW10D	08/27/03	5.38		
LW10S	10/23/03	dry	LW10D	10/23/03	4.33		
LW10S	02/19/04	12.98	LW10D	02/19/04	8.14	0.32	
LW10S	06/09/04	12.08	LW10D	06/09/04	8.66	0.23	
LW10S	08/10/04	dry	LW10D	08/10/04	4.42		
LW10S	11/18/04	dry	LW10D	11/18/04	5.04		0.26
LW11S	05/18/99	17.63	LW11D	05/18/99	10.45	0.41	
LW11S	09/21/99	14.87	LW11D	09/21/99	8.28	0.41	
LW11S	12/06/99	15.10	LW11D	12/06/99	7.23	0.40	
LW11S	02/16/00	17.16	LW11D	02/16/00	8.69	0.49	
LW11S	05/23/00	16.09	LW11D	05/23/00	9.54	0.49	
LW11S	08/29/00	14.59	LW11D	08/29/00	3.5 <del>-</del>	0.55	
LW11S	11/09/00	13.92	LW11D	11/09/00	<u></u>		
LW11S	02/12/01	14.48	LW11D	02/12/01	5.90	0.53	
LW11S	06/04/01	14.45	LW11D	06/04/01	5.69	0.54	
LW11S	08/16/01	13.86	LW11D	08/16/01	2.10	0.74	
LW11S	11/28/01	14.00	LW11D	11/28/01	4.50	0.60	
LW11S	02/27/02	17.24	LW11D	02/27/02	7.24	0.57	
LW11S	06/27/02	15.70	LW11D	06/27/02	10.20	0.33	
LW11S	08/26/02	14.73	LW11D	08/26/02	6.33	0.52	
LW11S	11/12/02	13.57	LW11D	11/12/02	5.17	0.54	
LW11S	02/11/03	16.64	LW11D	02/11/03	7.25	0.55	
LW11S	05/08/03	17.19	LW11D	05/08/03	9.76	0.43	
LW11S	08/27/03	14.78	LW11D	08/27/03	5.69	0.56	
LW11S	10/23/03	13.98	LW11D	10/23/03	5.06	0.56	
LW11S	02/19/04	16.97	LW11D	02/19/04	7.96	0.52	
LW11S	06/09/04	15.38	LW11D	06/09/04	9.00	0.39	
LW11S	08/10/04	14.44	LW11D	08/10/04	4.58	0.61	
LW11S	11/18/04	13.84	LW11D	11/18/04	5.37	0.54	0.51
			1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	05/19/00	11 57		
			LW12D1 (b) LW12D1	05/18/99 09/21/99	11.57 5.58		
			LW12D1	12/06/99	10.30		
			LW12D1	02/16/00	10.13		
			LW12D1	05/23/00	9.79		
			LW12D1	08/29/00	5.64		
			LW12D1	11/09/00	5.36		
			LW12D1	02/12/01	6.10		
			LW12D1	06/04/01	6.03		
			LW12D1	08/16/01	4.63		
			LW12D1	11/28/01	6.69		
			LW12D1	02/27/02	8.14		
			LW12D1	06/27/02	10.44		
			LW12D2 (b,c)	05/18/99	11.01	0.01	
			LW12D2 (b,c)	09/21/99	4.55	0.01	
			1				

7/18/2005 \\Edmdata\\wproc\231\009\132\\PhIII RI 071905\\PhIII RI\_Tb 6-2 Table 6-2

Uppe	er Groundwa	iter Zone	Lower	Groundwate	er Zone		ıl Gradients
						Vertical	Average Vertical
Well	Date	GW Elevation	Well	Date	GW Elevation	Gradient (a)	Gradient
			LW12D2	12/06/99	9.84	0.01	
			LW12D2	02/16/00	9.32	0.02	
			LW12D2	05/23/00	8.86	0.02	
			LW12D2	08/29/00	4.56	0.02	
			LW12D2	11/09/00	4.68	0.01	
			LW12D2	02/12/01	5.36	0.01	
			LW12D2	06/04/01	5.14	0.02	
			LW12D2	08/16/01	3.81	0.02	
			LW12D2	11/28/01	6.07	0.01	
			LW12D2	02/27/02	6.86	0.02	
			LW12D2	06/27/02	9.80	0.01	0.01 (c)
LW20S	10/23/03	14.65	LW20D	08/27/03	4.65	0.61	
LW20S	02/19/04	16.96	LW20D	02/19/04	8.51	0.48	
LW20S	06/09/04	15.33	LW20D	06/09/04	9.06	0.38	
LW20S	08/10/04	14.61	LW20D	08/10/04	4.61	0.61	
LW20S	11/18/04	15.09	LW20D	11/18/04	5.34	0.59	0.53
LW29S	10/23/03	12.46	LW29D	08/27/03	4.66	0.50	
LW29S	02/19/04	14.82	LW29D	02/19/04	8.57	0.37	
LW29S	06/09/04	13.49	LW29D	06/09/04	8.96	0.28	
LW29S	08/10/04	12.78	LW29D	08/10/04	4.60	0.52	
LW29S	11/18/04	12.37	LW29D	11/18/04	5.32	0.45	0.43
LW32S	10/23/03	13.69	LW32D	08/27/03	4.36	0.68	
LW32S	02/19/04	17.12	LW32D	02/19/04	8.91	0.53	
LW32S	06/09/04	15.05	LW32D	06/09/04	9.45	0.39	
LW32S	08/10/04	14.04	LW32D	08/10/04	5.44	0.62	
LW32S	11/18/04	13.67	LW32D	11/18/04	6.23	0.54	0.55

(a)

Vertical gradient was calculated using a distance between the midpoint of the screened intervals in each groundwater zone or unit (including an adjustment for variations in the elevation of the water table within the screened interval). The screen was not fully saturated at time of WL measurements; midpoint of screened interval was adjusted to account for unsaturated portion of screen.

<sup>(</sup>c) Monitoring wells LW12D1 and LW12D2 were abandoned in the summer of 2002 prior to the remedial action conducted within the former PCP mixing area.

<sup>(</sup>b) LW12D2 is screened in the deep sand unit; values shown represent vertical gradient between lower groundwater zone and deep groundwater zone.

#### TABLE 7-1 FOURTH QUARTER 2004 THROUGH SECOND QUARTER 2005 GROUNDWATER DATA - DETECTED ANALYTES SHORELINE (BEACH) WELLS TIME OIL NORTHWEST TERMINAL

Sample Identification: Laboratory Identification: Date Collected: SEMIVOLATILES (µg/L) EPA Method SW8270 Acenaphthene bis(2-Ethylhexyl)phthalate	Minimum Preliminary Screening Level  520 (a 2.2 (l 3.9 (a 6.3 (a	0.99 U	LW36D 0502088-01 2/17/2005	LW36D P5F0441-04 06/08/2005	LW37D 0411059-09 11/10/2004	LW37D 0502088-02 2/17/2005	LW37D P5F0441-05 06/08/2005		Wells LW38D 0502088-03	LW38D P5F0441-03	LW39D 0411059-11	LW39D 0502088-04	LW39D-Dup 0502088-05	LW39D P5F0441-02
Laboratory Identification: Date Collected:  SEMIVOLATILES (µg/L) EPA Method SW8270 Acenaphthene bis(2-Ethylnexyl)phthalate	520 (a 2.2 (l 3.9 (d	0411059-08 11/10/2004 ) 0.99 U	0502088-01 2/17/2005	P5F0441-04 06/08/2005	0411059-09	0502088-02	P5F0441-05	0411059-10						
Date Collected:  SEMIVOLATILES (µg/L)  EPA Method SW8270  Acenaphthene bis(2-Ethylhexyl)phthalate	520 (a 2.2 (l 3.9 (d	) 0.99 U 0.99 U	2/17/2005	06/08/2005					0002000-00					
SEMIVOLATILES (µg/L) EPA Method SW8270 Acenaphthene bis(2-Ethylhexyl)phthalate	520 (a 2.2 (l 3.9 (d	) 0.99 U						11/10/2004	2/17/2005	06/08/2005	11/10/2004	2/17/2005	2/17/2005	06/08/2005
EPA Method SW8270 Acenaphthene bis(2-Ethylhexyl)phthalate	2.2 (I 3.9 (d	0.99 U	0.951 U				00,00,200	11,710,2001	271172000	00,00,200	1171072001	2,11,2000	2117200	00,00,200
bis(2-Ethylhexyl)phthalate	2.2 (I 3.9 (d	0.99 U	0.951 U											
	3.9 (			5.00 U	1.01 U	1.01 U	5.00 U	0.984 U	0.997 U	5.00 U	1.06 U	0.978 U	0.99 U	5.00 U
Fluorene			0.951 U	10.00 U	1.01 U	1.01 U	10.00 U	0.984 U	0.997 U	10.00 U	1.06 U	0.978 U	1.25	10.00 U
1 Idolollo	6.3 (0	) 0.99 U	0.951 U	5.00 U	1.01 U	1.01 U	5.00 U	0.984 U	0.997 U	5.00 U	1.06 U	0.978 U	0.99 U	5.00 U
Phenanthrene		) 0.99 U	0.951 U	5.00 U	1.01 U	1.01 U	5.00 U	0.984 U	0.997 U	5.00 U	1.06 U	0.978 U	0.99 U	5.00 U
Pentachlorophenol	3 (1	) 4.95 U	4.76 U	10.00 U	5.07 U	5.04 U	10.00 U	4.92 U	4.99 U	10.00 U	5.29 U	4.89 U	4.95 U	10.00 U
PAHs (μg/L) EPA Method SW8270 - SIM														
	520 (8			0.100 U	0.054 U	0.0499 U	0.100 U	0.12	0.0515	0.100 U	0.145	0.061	0.0612	0.100 U
Acenaphthylene	620 (			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
Anthracene	13 (0			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
Benzo(a)anthracene 0	0.018 (I	0.0505 U	0.0478 U	0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U	0.0509 U	0.051 U	0.100 U
1 71 7	0.014 (			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
Benzo(b)fluoranthene 0	0.018 (I			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
Benzo(g,h,i)perylene		0.0505 U	0.0478 U	0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U	0.0509 U	0.051 U	0.100 U
` '	0.018 (1			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
,	0.018 (I			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
	6.16 (0			0.100 U	0.0756	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
	3.9 (0			0.100 U	0.054 U	0.0499 U	0.100 U	0.19	0.0515	0.100 U	0.0517 U		0.051 U	0.100 U
	0.018 (1	1 I		0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
	620 (8			0.100 U	0.054 U	0.0499 U	0.100 U	0.08	0.0515 U	0.100 U	0.114	0.0509 U	0.051 U	0.100 U
	620 (			0.100 U	0.054 U	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U		0.051 U	0.100 U
Pyrene	4000 (1	0.0505 U	0.0478 U	0.100 U	0.0864	0.0499 U	0.100 U	0.05 U	0.0515 U	0.100 U	0.0517 U	0.0509 U	0.051 U	0.100 U
VOLATILES (μg/L) EPA Method SW8260														
1,2,4-Trimethylbenzene	130 (8	) 1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1 U	1.00 U
Benzene	51 (I	) 0.3 U	0.3 U	1.00 U	0.3 U	0.3 U	1.00 U	0.3 U	0.3 U	1.00 U	0.3 U	0.3 U	0.3 U	1.00 U
Isopropylbenzene	130 (6	) 1 U	1 U	2.00 U	1 U	1 U	2.00 U	1 U	1 U	2.00 U	1 U	1 U	1 U	2.00 U
Methyl tert-Butyl Ether 3	31,000 (	) 1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1 U	1.00 U
n-Butylbenzene	130 (	) 1 U	1 U	5.00 U	1 U	1 U	5.00 U	1 U	1 U	5.00 U	1 U	1 U	1 U	5.00 U
	130 (			1.00 U	1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U		1 U	1.00 U
	620 (8			2.00 U	1 U	1 U	2.00 U	1 U	1 U	2.00 U	1 U		1 U	2.00 U
o-Xylene	1.8 (0	)  1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1 U	1.00 U
,	130 (			1.00 U	1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U		1 U	1.00 U
tert-Butylbenzene	130 (	) 1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1.00 U	1 U	1 U	1 U	1.00 U
HYDROCARBONS (mg/L) NWTPH-Dx														
TPH-Diesel Range		0.252	0.243 U	0.250 U	0.25 U	0.248 U	0.250 U	0.954	0.375	0.250 U	0.455	0.247 U	0.758	0.250 U
TPH-Motor Oil Range		0.58	0.486 U	0.500 U	0.5 U	0.495 U	0.500 U	0.702	0.475 U	0.500 U	0.52	0.494 U	0.509 U	0.500 U
NWTPH-G														
TPH-Gasoline Range	12 (0	0.1 U	0.1 U	0.080 U	0.1 U	0.1 U	0.080 U	0.120	0.1 U	0.080 U	0.133	0.1 U	0.1 U	0.080 U

#### TABLE 7-1 FOURTH QUARTER 2004 THROUGH SECOND QUARTER 2006 GROUNDWATER DATA - DETECTED ANALYTES SHORELINE (BEACH) WELLS TIME OIL NORTHWEST TERMINAL

Sample Identification: Laboratory Identification:	Minimun Prelimina Screenin	ry g	LW36D 0411059-08	LW36D 0502088-01	LW36D P5F0441-04	LW37D 0411059-09	LW37D 0502088-02	LW37D P5F0441-05	oreline (Beach) LW38D 0411059-10	LW38D 0502088-03	LW38D P5F0441-03	LW39D 0411059-11	LW39D 0502088-04	LW39D-Dup 0502088-05	LW39D P5F0441-02
Date Collected:	Level		11/10/2004	2/17/2005	06/08/2005	11/10/2004	2/17/2005	06/08/2005	11/10/2004	2/17/2005	06/08/2005	11/10/2004	2/17/2005	2/17/2005	06/08/2005
PRIORITY POLLUTANT		ı													
METALS (mg/L)		- 1													
Arsenic (7060)	1.5	(e)	0.001 U	0.001 U	0.00106	0.00578	0.001 U	0.001 U	0.00867	0.00391	0.00438	0.0107	0.00292	0.00274	0.00105
Chromium (6010)	0.011	(c)	0.005 U	0.0064	0.001 U	0.0261	0.0078	0.001 U	0.0138	0.008	0.001 U	0.0124	0.0063	0.0064	0.001 U
Copper (6010)	0.009	(f)	0.01 U	0.01 U	0.002 U	0.0196	0.01 U	0.002 U	0.01 U	0.01 U	0.002 U	0.01 U	0.01 U	0.01 U	0.002 U
Lead (7421)	0.02	(e)	0.00025 U	0.0001 U	0.001 U	0.0098	0.000728	0.001 U	0.0002 U	0.000117	0.001 U	0.0003	0.000132	0.0001	0.001 U
Nickel (6010)	0.052	(c)	0.005 U	0.005 U	0.002 U	0.0117	0.005 U	0.002 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U	0.00365
Zinc (6010)	0.10	(g)	0.01 U	0.01 U	0.005 U	0.0505	0.01 U	0.005 U	0.01 U	0.01 U	0.005 U	0.01 U	0.01 U	0.01 U	0.005 U

#### Preliminary Screening Levels:

- (a) Oregon Screening Level Values (SLVs), surface water aquatic and Oregon Ambient Water Quality Criteria (AWQC), Tables 20 and 33A, fresh water, acute.
- (b) Oregon AWQC, Tables 20 and 33A, fish consumption only and National Recommended Water Quality Criteria, organism only.
- (c) Oregon Screening Level Values (SLVs) surface water, aquatic.
- (d) Oregon Department of Environmental Quality Risk-Based Concentration, Groundwater in Excavation, Construction and Excavation Worker ("Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites", ODEQ, September 22, 2003).
- (e) Site-specific background concentrations (Phase I and II Contaminants of Potential Concern Screening Report, Time Oil Northwest Terminal, Landau Associates, September 10, 1999).
- (f) Oregon Screening Level Values (SLVs), surface water aquatic and National Recommended Water Quality Criteria, fresh water chronic.
- (g) Oregon AWQC, fresh water acute and fresh chronic.

#### Notes:

Highlighted values are detected concentrations.

Outlined values are detected concentrations that exceed the minimum preliminary screening level.

Results are only shown for constituents where concentrations were detected in at least one of the riverbank and shoreline wells (except for pentachlorophenol). The results for the full set of analyzed constituents are included in the respective quarterly reports.

Presence of: NAPL Location Sheen Odor Depth (ft. bgs) Main Terminal Tank Farm Area LW-27S 8 to 24 product at 22.5 slight diesel no LW-27S 8 24 to no strong diesel faint diesel LW-27S 24 to 44.5 no no LW-17D 0 mild petroleum-like to 16 no no LW-17D 19 to 22 no no mild petroleum-like LW-17D 22 to 27 no heavy strong petroleum-like 27 LW-17D to 34 mild strong petroleum-like no LW-17D 34 to 40 no no mild petroleum-like LW-21S 17 4.5 moderate strong diesel to no LW-21S 17 to 17.5 no no mild diesel LW-19S 7 16 strong diesel to no no LW-19S 16 to 185 slight strong diesel no LW-19S 18.5 to 19 mild diesel no no LW-20S 4 to 13.5 strong diesel no no LW-20S 13.5 14.5 mild diesel to no no LW-20S 3.5 to 13.5 slight strong diesel no LW-26D 3 to 15 slight diesel no no LW-26D 15 24 strong diesel to no slight LW-26D 24 to 26.5 no no strong diesel LW-26D 33 35 mild asphaltic to no no 2 Ν to 15 faint diesel-type no no 15 Ν to 17 slight faint diesel-type 17 Ν to 18 faint diesel-type no no Ρ 0 14 strong gasoline to no no Р 14 to 16 no yes strong gasoline Ρ 16 to 17.5 no no faint hydrocarbon Q 0 to 14 no no strong gasoline Q 14 17 strong gasoline to no yes G13-3 12 16 to very strong petroleum no no 5 G13-3 to 12 strong petroleum no G9-1 8 very strong petroleum to 16 no no G9-1 3 to 8 mild petroleum no no G14-1 1 to 3.5 no no mild ethanol G14-1 3.5 8 mild petroleum to no no 8 G14-1 to 16 no no strong petroleum

7/19/05 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI Rpt\_Tb 7-2 Field observations

to

to

to

29

26

27

no

no

no

no

no

no

27

24

26

LW-23D

LW-23D

LW-23D

Landau Associates

slight to moderate petroleum-like

slight petroleum-like

moderate petroleum-like

Presence of: Location NAPL Odor Sheen Depth (ft. bgs) RW-2 19 to 42 no no slight to moderate hydrocarbon LW-22D 25 30.5 slight petroleum-like to no no LW-4S 18 to 20 no no slight organic LW-15D 25 to 40 no no mild petroleum-like 22 G2-2 mild petroleum to 24 no no G3-1 12 16 mild petroleum to no no LW-24D 26 30 mild diesel to no no LW-8S 0 to 16.5 hydrocarbon no no R 15 to 22 no no faint, sweet, soap-like 22 R to 30 faint diesel-type no no LW-4D 27.5 40.5 faint to moderate hydrocarbon to no no LW-4D 26 to 27.5 faint hydrocarbon no no 0 25 30 faint diesel-type to no no LW-25D 28.5 31.5 faint diesel to no no LW-6D 28 35 faint to no no **Bell Terminal Tank Farm Area** LW-32D 14 17 to slight strong diesel no LW-32D 17 to 18 moderate strong diesel LW-32D 18 to 19 strong strong diesel no LW-32S 15 20 slight diesel moderate to no G25-1 17 to 19.5 slight no no LW-30D 12.5 16.5 to no no strong petroleum-like LW-30D 16.5 to 17.5 strong petroleum-like no slight LW-30S 12.5 to 14 no mild petroleum no LW-30S 17 strong petroleum 14 to no no LW-30S 17 18 strong petroleum to no slight LW-30S 18 to 19 no slight mild petroleum BT-05 16 to 19.5 no trace strong petroleum-like BT-05 13 strong petroleum-like to 16 no no BT-01 14 to 19.75 no no very strong petroleum-like BT-01 12 to 14 strong petroleum-like no no BT-03 13.5 to 17 strong petroleum-like no no BT-03 17 20 mild petroleum-like to no no BT-06 14 18.5 strong petroleum-like to no no BT-08 15

7/19/05 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI Rpt\_Tb 7-2 Field observations

to

19

no

no

Landau Associates

strong petroleum-like

			Presence of:					
Location	Depth	ı (ft. b	gs)	NAPL	Sheen	Odor		
BT-09	15.5	to	17	no	no	strong petroleum-like		
G26-1	15	to	16	no	no	strong petroleum		
LW-35D	28.5	to	29.5	no	no	mild rotton sewer-like		
BT-02	16	to	19	no	no	mild petroleum-like		
BT-04	14	to	24	no	no	mild petroleum-like		
BT-07	15.5	to	19.5	no	no	mild petroleum-like		
G21-1	17	to	20	no	no	mild petroleum		
G22-1	15.5	to	16	no	no	mild petroleum		
LW-31S	16.5	to	18.5	no	no	mild gasoline-like		
LW-28S	13	to	13.5	no	no	mild ethanol-like		
SCH-56	14	to	16	no	no	petroleum-like		
SCH-56	16	to	18	no	yes	yes		
SCH-56	18	to	20	no	no	slight		
SCH-57	11.5	to	12	no	no	diesel		
SCH-57	15	to	18.5	no	no	slight to moderate petroleum-lik		
5511 57	10		10.0	110		ongricio modorato potrolodin inc		
SCH-59	12	to	14	no	no	moderate non-petroleum-like		
SCH-59	14	to	17	no	no	moderate to strong		
SCH-59	17	to	17.5	no	slight	strong		
SCH-61	15.6	to	17.8	no	no	moderate to strong		
SCH-63/63B	14.5	to	16	no	no	moderate to strong petroleum-lik		
	16	to	18	no	slight	petroleum-like		
Phase II Study Area								
LB14	8	to	16	no	heavy	strong		
LB14	16	to	18.5	no	slight	faint		
LW-8S	16.5	to	17.5	no	medium	strong hydrocarbon		
LW-2S	8	to	10	no	no	faint hydrocarbon		
LW-2S	10	to	11	no	slight	faint hydrocarbon		
LW-2S	11	to	17	no	moderate	moderate hydrocarbon		
LW-2S	17	to	18	no	slight	moderate hydrocarbon		
LB12	12	to	16	no	slight	slight to moderate		
LB13	11	to	16	no	slight	slight to moderate		
LB13	16	to	18	no	slight	slight		
LB17	0.5	to	1.5	trace	slight	moderate		
LB17	9	to	12	no	slight	moderate		

 $\label{lem:condition} \ensuremath{7/19/05} \ensuremath{\mbox{\sc NFdmdata}\mbox{\sc NFd$ 

Presence of:

				Presence of:						
 Location	Depth	(ft. b	gs)	NAPL	Sheen	Odor				
LB17	12.5	to	19.5	no	slight	no				
LB2	6	to	9	no	slight	faint hydrocarbon				
LB2	9	to	16	no	no	faint hydrocarbon				
LB-25	12.5	to	17	no	slight	petroleum				
RW-3	8.5	to	15.5	no	slight	strong mineral spirit				
RW-3	15.5	to	17.5	no	no	slight mineral spirit				
OX-8D	14	to	17	no	no	strong mineral spirit/PCP				
OX-8S	13	to	17	no	no	strong mineral spirit/PCP				
LW-11S	0	to	15	no	no	strong mineral spirit				
LW-11D	0	to	15	no	no	strong mineral spirit				
LW-12D1	0	to	16.5	no	no	strong hydrocarbon				
LW-12D1	20	to	35	no	no	strong hydrocarbon				
LW-12D2	0	to	16.5	<b>n</b> o	<b>n</b> o	atrong hydrogerhan				
LW-12D2	0 20	to	30	no	no	strong hydrocarbon				
LVV-12D2	20	ιο	30	no	no	strong hydrocarbon				
LW-12D2	90	to	100	no	no	slight to moderate hydrocarbon				
LW-12D2	30	to	90	no	no	moderate hydrocarbon				
LB-24	0	to	14	no	no	slight				
LB3	4	to	14	no	no	moderate hydrocarbon				
LW-3D	13	to	17	no	no	moderate hydrocarbon				
OX-6S	15.5	to	18	no	no	mild mineral spirit/PCP				
OX-7S	16	to	18	no	no	mild mineral spirit/PCP				
LB-11	10	to	17.5	no	no	faint to moderate hydrocarbon				
LB-5	1	to	9	no	no	faint hydrocarbon				
LB-8	4	to	5	no	no	faint hydrocarbon				

#### TABLE 7-3 LNAPL OBSERVATIONS AND MEASUREMENTS IN GROUNDWATER AUGUST 1993 - NOVEMBER 2004 TIME OIL NORTHWEST TERMINAL

LNAPL

			LNAPL	
Well	Date	Time	Thickness (ft)	Observations
Upper Zone Gr	oundwater Monitori	na Wells		
N	03/25/1997	11:48		
N	03/31/1997	08:59		Hydrocarbon odor, product
N	07/16/1997	07:20	1.20	Light brown color; thick coating on probe
N	10/21/1997	16:09		No product - strong petroleum odor
N	10/23/1997	17:20		No product - strong petroleum odor
N	01/27/1998	11:13	0.02	
N	05/18/1998	17:20	0.06	
N	08/17/1998	10:40	0.02	Thin coat of thick product
N	11/13/1998	09:48	0.01	01
N	02/16/1999	12:55	0.27	Strong petroleum odor
N	05/18/1999	14:47	0.04	
N N	09/21/1999 12/06/1999	11:23 14:00	0.01	
N	02/16/2000	10:10		
N	05/23/2000	16:24		Strong petroleum odor, no product
N	08/29/2000	13:07		Strong petroleum odor, no product
N	11/09/2000	12:26	0.03	
N	02/12/2001	15:49		
N	06/04/2001	11:31		
N	08/16/2001	10:29		Trace product
N	11/28/2001	11:27		Trace product
N	02/27/2002	13:25		·
N	04/05/2002	08:09		
N	05/29/2002	00:00		
N	06/27/2002	14:12		
N	08/26/2002	15:56		
N	11/13/2002	07:27	0.03	Product present
N	02/11/2003	08:49		
N	05/08/2003	06:51		
N	08/27/2003	13:33		
N	10/23/2003	12:08		
N	02/19/2004	12:21		
N N	06/09/2004 08/10/2004	07:36 10:55		
N	11/18/2004	08:38		
IN	11/10/2004	00.50		
Р	03/25/1997	11:45		
Р	03/31/1997	08:55		Hydrocarbon odor, product
Р	07/16/1997	07:15	0.17	Light coating on probe; light brown color
P	10/21/1997	16:05		No product - strong petroleum odor
P	10/23/1997	17:25		No product - strong petroleum odor
P	01/27/1998	11:09		
Р	05/18/1998	17:18		Trace of product on probe
P	08/17/1998	10:37	0.01	Sheen on probe, strong petroleum odor
Р	11/13/1998	09:46	0.05	Strong gasoline odor
P	02/16/1999	12:52	0.06	Strong petroleum odor
P	05/18/1999	14:43	0.13	
P	09/21/1999	11:20	0.01	
P	12/06/1999	13:55		
P P	02/16/2000	10:08		Trace of product on surface
P	05/23/2000 08/29/2000	16:21 13:04	0.01	Trace of product off surface
P	11/09/2000	12:24	0.03	
P	02/12/2001	15:46	0.03	
P	06/04/2001	11:27		Trace product
Р	08/16/2001	10:28		Trace product
Р	11/28/2001	11:24		
Р	02/27/2002	13:22	0.10	Strong ethanol-like odor
Р	04/05/2002	08:07	0.10	
P	05/29/2002	00:00		Trace product
P	06/27/2002	14:11		·
Р	08/26/2002	15:54		
Р	11/13/2002	07:25	0.04	Product present
P	02/11/2003	08:44	0.01	Product present
P	05/08/2003	06:47	0.01	Trace product
P	08/27/2003	13:30		
P	10/23/2003	12:05	0.02	
P	02/19/2004	12:19		N
P	06/09/2004	07:35		New reference elevation July 2004
P P	08/10/2004	10:53		
1	11/18/2004	08:37		

#### TABLE 7-3 LNAPL OBSERVATIONS AND MEASUREMENTS IN GROUNDWATER AUGUST 1993 - NOVEMBER 2004 TIME OIL NORTHWEST TERMINAL

10/611	Data	Time	LNAPL	Observations
Well	Date	Time	Thickness (ft)	Observations
Q Q	03/25/1997 03/31/1997	11:42 08:52		Hydrocarbon odor
Q	07/16/1997	07:10	0.02	Light coating on probe; light brown color
Q	10/21/1997	16:04		No product - strong petroleum odor
Q Q	10/23/1997 01/27/1998	17:29 11:05		No product - strong petroleum odor
Q	05/18/1998	17:16		
Q	08/17/1998	10:35		Slight sheen on probe; no product, strong petroleum odor
Q	11/13/1998	09:44	0.01	Strong gasoline odor
Q	02/16/1999	12:49	0.01	Strong petroleum odor
Q	05/18/1999 09/21/1999	14:40 11:17		Strong odor when cap removed
Q	12/06/1999	13:53		
Q	02/16/2000	10:06		Film of product
Q	05/23/2000	16:19		Strong petroleum odor, no product
Q	08/29/2000 11/09/2000	13:01 12:23		Trace of product
Q	02/12/2001	15:45		Trace of product
Q	06/04/2001	11:25		
Q	08/16/2001	10:26		Trace product
Q	11/28/2001	11:21	0.42	Otaca a material company and a management
Q	02/27/2002 04/05/2002	13:20 08:05		Strong petroleum odor, no product Trace product
Q	05/29/2002	00:00		Trace product
Q	06/27/2002	14:10		Trace product
Q	08/26/2002	15:52		
Q	11/13/2002 02/11/2003	07:30 08:47	0.01	Product present
Q	05/08/2003	06:48	0.22	
Q	08/27/2003	13:28		
Q	10/23/2003	12:03	0.24	
Q	02/19/2004	12:17		Trace product
Q Q	06/09/2004 08/10/2004	07:34 10:52		
Q	11/18/2004	08:35	0.25	
1.14/0076	02/24/4007	11:05		
LW007S LW007S	03/31/1997 07/16/1997	11:05 08:05		
LW007S	10/21/1997	16:45		
LW007S	01/27/1998	12:47		
LW007S	05/18/1998	17:48		
LW007S LW007S	08/17/1998 11/13/1998	10:48 10:12		Strong gasoline odor
LW007S	02/16/1999	13:53		Strong gasonine odol
LW007S	05/18/1999	15:23		
LW007S	09/21/1999	12:03		
LW007S	12/06/1999	14:27		
LW007S LW007S	02/16/2000 05/23/2000	10:46 17:09		
LW007S	08/29/2000	13:53		
LW007S	11/09/2000	13:14		
LW007S	02/12/2001	15:39		
LW007S LW007S	06/04/2001 08/16/2001	12:17 11:33		
LW007S	11/28/2001	12:22		
LW007S	02/27/2002	14:15		
LW007S	03/05/2002	10:52		
LW007S	04/05/2002	08:57		
LVV007S LVV007S	05/29/2002 06/27/2002	00:00 14:45		
LW007S	08/26/2002	17:18		
LW007S	11/13/2002	09:16		
LW007S	02/11/2003	10:37		
LW007S LW007S	05/08/2003 08/27/2003	08:27 14:58		
LW007S	10/23/2003	13:39		
LW007S	02/19/2004	14:42		
LW007S	06/09/2004	09:25		
LW007S	08/10/2004	11:26		
LW007S	11/18/2004	08:55		
LW008S	05/18/1999	14:55		
LW008S	09/21/1999	12:24		
LW008S LW008S	12/06/1999 02/16/2000	14:40 10:16		
L+ 10000	3211012000	10.10		

## TABLE 7-3 LNAPL OBSERVATIONS AND MEASUREMENTS IN GROUNDWATER AUGUST 1993 - NOVEMBER 2004 TIME OIL NORTHWEST TERMINAL

I NAPI

			LNAPL	
Well	Date	Time	Thickness (ft)	Observations
LW008S	05/23/2000	17:42		
LW008S	08/29/2000	14:26		
LW008S	11/09/2000	13:32		
LW008S	02/12/2001	15:58		
LW008S	06/04/2001	13:05		
LW008S	08/16/2001	12:00		
LW008S	11/28/2001	12:57	0.04	
LW008S	02/27/2002	14:37		
LW008S	03/05/2002	11:09		
LW008S	04/05/2002	08:17		
LW008S	05/29/2002	00:00		
LW008S	06/27/2002	15:21		
LW008S	08/26/2002	16:38		
LW008S	11/13/2002	08:50		
LW008S LW008S	02/11/2003 05/08/2003	09:48		
LW008S	08/27/2003	08:00 14:25		
LW008S	10/23/2003	12:42		
LW008S	02/19/2004	15:03		
LW008S	06/09/2004	08:43		
LW008S	08/10/2004	12:05		
LW008S	11/18/2004	09:15		
2440000	1111012001	00.10		
LW011S	05/18/1999	15:10		
LW011S	09/21/1999	11:51		
LW011S	12/06/1999	15:05		
LW011S	02/16/2000	11:01		
LW011S	05/23/2000	11:01		
LW011S	08/29/2000	14:55		
LW011S	11/09/2000	13:36	0.37	First occurrence of product in well.
LW011S	02/12/2001	15:18		
LW011S	06/04/2001	13:12		
LW011S	08/16/2001	11:24	0.28	
LW011S	11/28/2001	12:51		Trace product
LW011S	02/27/2002	14:59		
LW011S	03/05/2002	11:40		
LW011S	04/05/2002	08:34		
LW011S	05/29/2002	00:00		
LW011S	06/27/2002	15:09		
LW011S	08/26/2002	16:48		
LW011S LW011S	11/13/2002 02/11/2003	08:54 10:03		
LW011S	05/08/2003	08:07		
LW011S	08/27/2003	14:36		
LW011S	10/23/2003	14:12		
LW011S	02/19/2004	14:02		
LW011S	06/09/2004	08:56		
LW011S	08/10/2004	12:08		
LW011S	11/18/2004	09:08	0.09	
LW021S	10/23/2003	12:16		
LW021S	02/19/2004	14:54	1.03	
LW021S	06/09/2004	07:44	0.11	
LW021S	08/10/2004	11:02	0.17	
LW021S	11/18/2004	08:43	0.11	
1340276	10/02/0002	12:20		
LW027S	10/23/2003	12:20	0.60	
LW027S	02/19/2004 06/09/2004	12:44	0.69	
LW027S		07:39	0.12	
LW027S LW027S	08/10/2004 11/18/2004	10:58 07:39	0.12 0.02	
LVVUZIO	11/10/2004	01.38	0.02	
PZ2	06/27/2002	15:18		
PZ2	08/26/2002	16:34		
PZ2	11/13/2002	08:25		
PZ2	02/11/2003	09:44		
PZ2	05/08/2003	07:45		
PZ2	08/27/2003	14:03		
PZ2	10/23/2003	13:21	0.06	
PZ2	02/19/2004	13:50		
PZ2	06/09/2004	08:33		
PZ2	08/10/2004	12:02		
PZ2	11/18/2004	09:20		
0.0016	06/07/0000	15:10		
OX001S	06/27/2002	15:13		
OX001S	08/26/2002	16:45		

7/19/05 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI Rpt\_Tb 7-3 wells with product

## TABLE 7-3 LNAPL OBSERVATIONS AND MEASUREMENTS IN GROUNDWATER AUGUST 1993 - NOVEMBER 2004 TIME OIL NORTHWEST TERMINAL

LNAPL

			LNAPL	
Well	Date	Time	Thickness (ft)	Observations
OX001S	11/13/2002	08:30		
OX001S	02/11/2003	09:59		
OX001S	05/08/2003	08:04		
OX001S	08/27/2003	14:38		
OX001S	10/23/2003	14:09		
OX001S	02/19/2004	14:10		
OX001S	06/09/2004	08:45		
OX001S	08/10/2004	12:07		
OX001S	11/18/2004	09:07	0.03	
0.0000	00/07/0000	45.40		
OX002S	06/27/2002	15:12		
OX002S	08/26/2002	16:44		
OX002S	11/13/2002	08:33		New reference elevation September 2002
OX002S	02/11/2003	10:06		
OX002S	05/08/2003	08:09		
OX002S	08/27/2003	14:33		
OX002S	10/23/2003	14:14		
			0.31	
OX002S	02/19/2004	14:07		
OX002S	06/09/2004	08:52		New reference elevation July 2004
OX002S	08/10/2004	12:09		
OX002S	11/18/2004	09:10	0.13	
OX003S	06/27/2002	15:14		
OX003S	08/26/2002	16:42		
OX003S	11/13/2002	08:31		
OX003S	02/11/2003	09:58		
OX003S	05/08/2003	08:03		
OX003S	08/27/2003	14:40		
OX003S	10/23/2003	14:10		
OX003S	02/19/2004	14:09		
OX003S	06/09/2004	08:51		
OX003S	08/10/2004	12:06		
OX003S	11/18/2004	09:13	0.33	
Deep Weller				
Deep Wells:	00/44/4000	40.00		Olimba abase alimba a mand minaral aminita lilas adas
B2	08/11/1993	10:02		Slight sheen, slight to mod mineral spirits-like odor
B2	10/26/1993	13:32		
B2	11/17/1993	13:32		
B2	12/17/1993	12:59		
B2	01/17/1994	13:12		
B2	02/18/1994	14:20		
B2	03/18/1994	12:59		
B2	04/18/1994	14:42		
B2	05/18/1994	15:22		
B2	06/17/1994	14:54		
B2	07/19/1994	09:20		
B2	08/17/1994	07:35		
B2	09/16/1994	07:27		
B2	10/17/1994	09:03		
B2	11/21/1994	11:51		
B2	12/19/1994	11:10		
B2	01/18/1995	11:18		
B2	02/21/1995	13:23		
B2	03/21/1995	13:05		
B2	04/19/1995	12:48		
B2	05/19/1995	13:38		
B2	07/17/1995	13:55		
B2 B2	08/22/1995	07:53		
	09/22/1995			
B2		08:28		
B2	11/20/1995	07:57		
B2	12/01/1995	08:29		
B2	12/19/1995	07:26		
B2	01/19/1996	08:38		
B2	02/20/1996	10:42		
B2	03/19/1996	09:23		
B2	04/19/1996	11:53		
B2	07/22/1996	14:24		
B2	08/20/1996	14:20		
B2	09/24/1996	08:11		
B2	10/28/1996	11:09		
B2	12/13/1996	10:47		
B2	03/25/1997	12:02		
B2	03/31/1997	09:27		
B2	07/16/1997	07:45		
B2	10/21/1997	16:30		

### **TABLE 7-3** LNAPL OBSERVATIONS AND MEASUREMENTS IN GROUNDWATER AUGUST 1993 - NOVEMBER 2004 TIME OIL NORTHWEST TERMINAL

- 1	N	Λ	D	П

			LINALL	
Well	Date	Time	Thickness (ft)	Observations
B2	01/27/1998	12:06		
B2	05/18/1998	17:54		
B2	08/17/1998	10:23		
B2	11/13/1998	10:17		
B2	02/16/1999	13:34		
B2	05/18/1999	15:50		
B2	09/21/1999	12:18		
B2	12/06/1999	14:39		
B2	02/16/2000	10:56		
B2	05/23/2000	17:33		
B2	08/29/2000	14:20		
B2	11/09/2000	13:29		
B2	02/12/2001	15:27		
B2	06/04/2001	13:04		
B2	08/16/2001	11:58		
B2	11/28/2001	12:46		
B2	02/27/2002	14:35		
B2	06/27/2002	15:07		
B2	08/26/2002	17:01		
B2	11/13/2002	09:03		
B2	02/11/2003	10:14		
B2	05/08/2003	08:13		
B2	08/27/2003	15:32		
B2	10/23/2003	14:08		
B2	02/19/2004	14:12		
B2	06/09/2004	09:02		
B2	08/10/2004	08:50		
B2	08/10/2004	10:29		
B2	11/18/2004	08:13		

NM = Not measured.

NA = Not available.

#### Notes:

- (1) Reference Elevation (Ref. Elev) is the north side of the top of the 1.25-, 2- or 4-inch well casing, reference elevation surveys were conducted by Zarosinski-Tatone Engineers, Inc., Portland, Oregon For the river gauge, the reference elevation was measured at a marked location on the south side of the dock on the Willamette River.
- (2) Depth to water (DTW) measured from surveyed reference elevation [see note (1)].
- (3) Where LNAPL thickness measured, groundwater elevation adjusted to account for the presence of LNAPL in the well using the method in " Estimation of Free Hydrocarbon Volume from Fluid Levels in Monitoring Wells" [Lenhard and Parker 1990;Groundwater 28(1):57-67].

<sup>--</sup> No measurable product or odor observed.

\* Well Point

# Volume II – Appendices Final Phase III Remedial Investigation Report Time Oil Northwest Terminal Portland, Oregon

July 19, 2005

Prepared for

Time Oil Co. 2737 West Commodore Way Seattle, WA 98100-1233

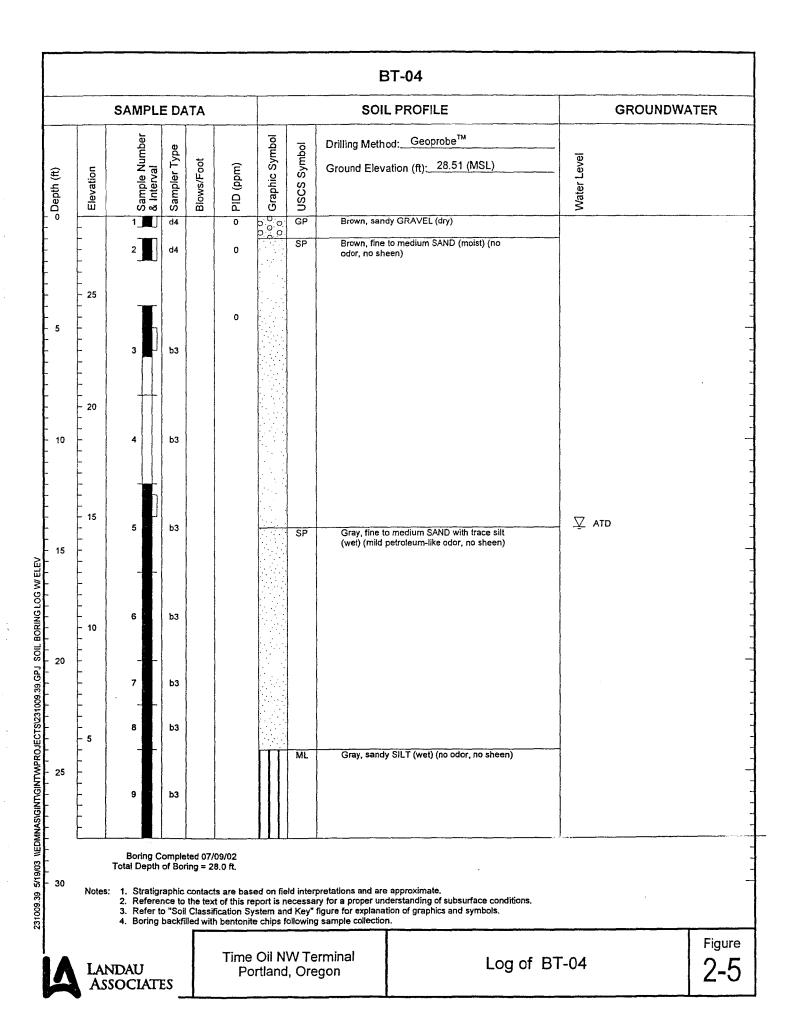


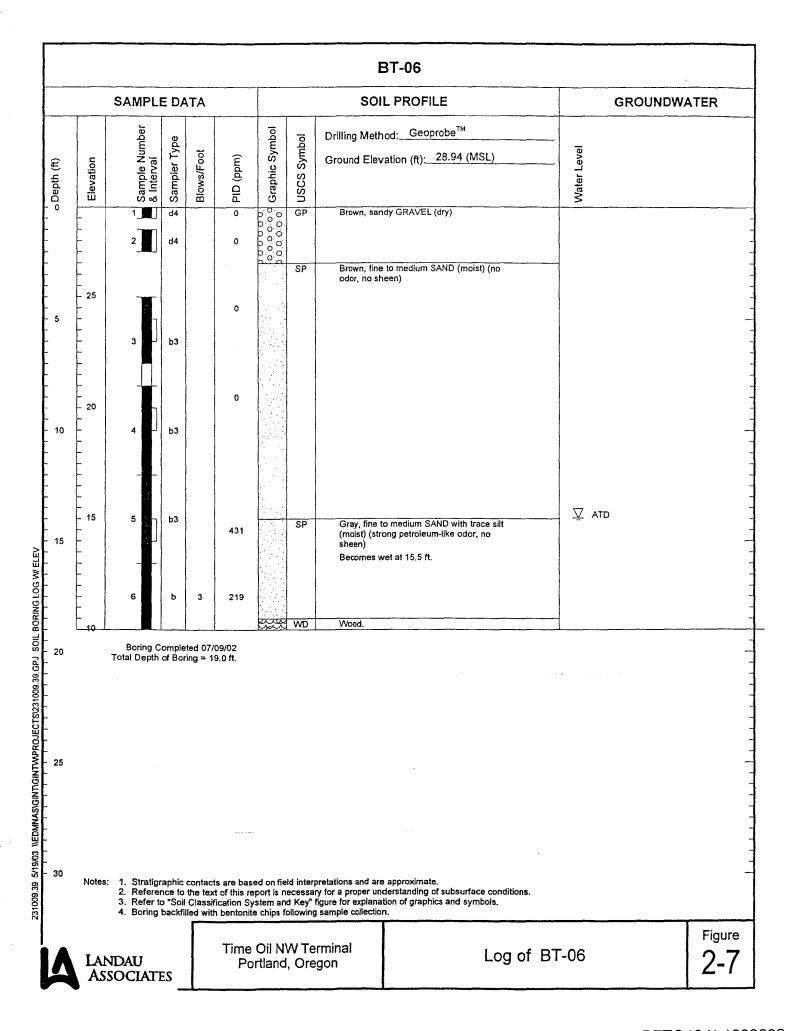
# **Phase III RI Well Completion Logs**

# **Soil Borings**

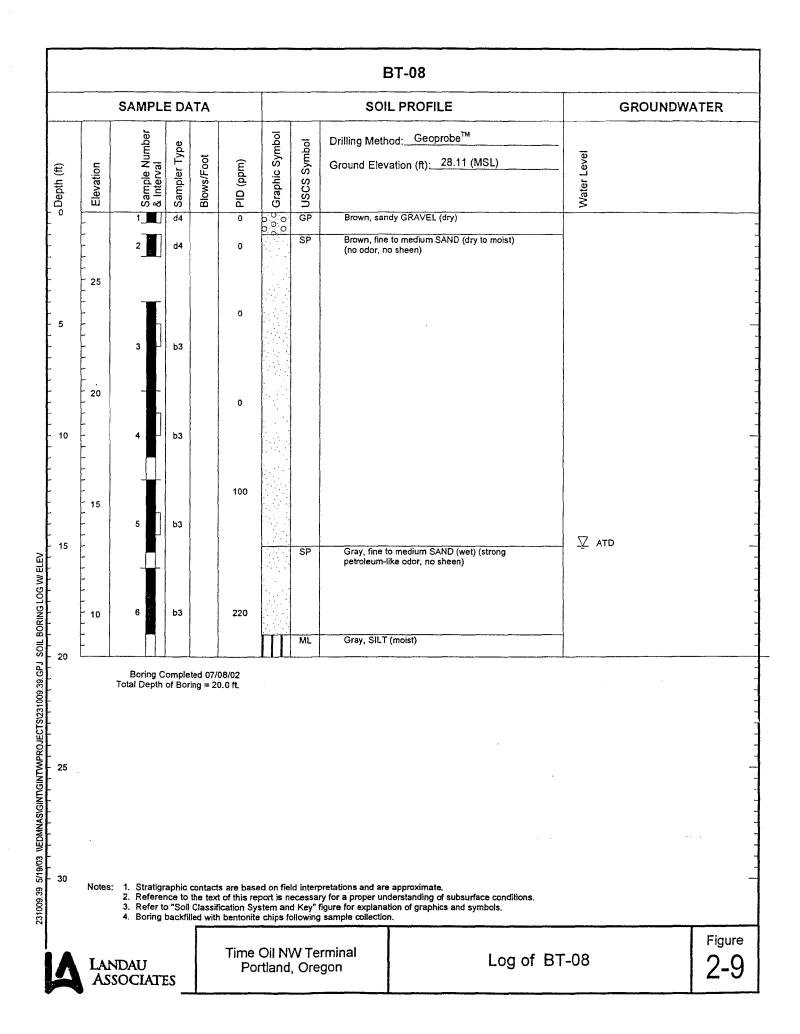
	SAI	/IPL	E DA	TA				SOIL PROFILE	GROUNDWAT	ΓER
Flevation		Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Geoprobe™  Ground Elevation (ft): 28.13 (MSL	Water Level	
			d4		0	000	GP	Brown, sandy GRAVEL (dry)		
25	5		d4		0		SP	Brown, fine to medium SAND (moist) ( odor, no sheen)	no	
	3		b3		0					
- 20	4		b3		O					
111	5		b3		0			Becomes wet.	. ∑. ATD	
- - - - - - -	) 6		b3		231		SP	Gray, fine to medium SAND (wet) (mild petroleum-like odor, no sheen)  Gray, silty, fine to medium SAND (wet		
				ted 07/6			ML	Gray SILT with sand and wood debris	(wet)	
No	2. F 3. F	Refere Refer t	nce to "Soil	the text	t of this re	port is noted	ecessa d Key"	pretations and are approximate, ny for a proper understanding of subsurface of figure for explanation of graphics and symbol g sample collection.	conditions. ds.	

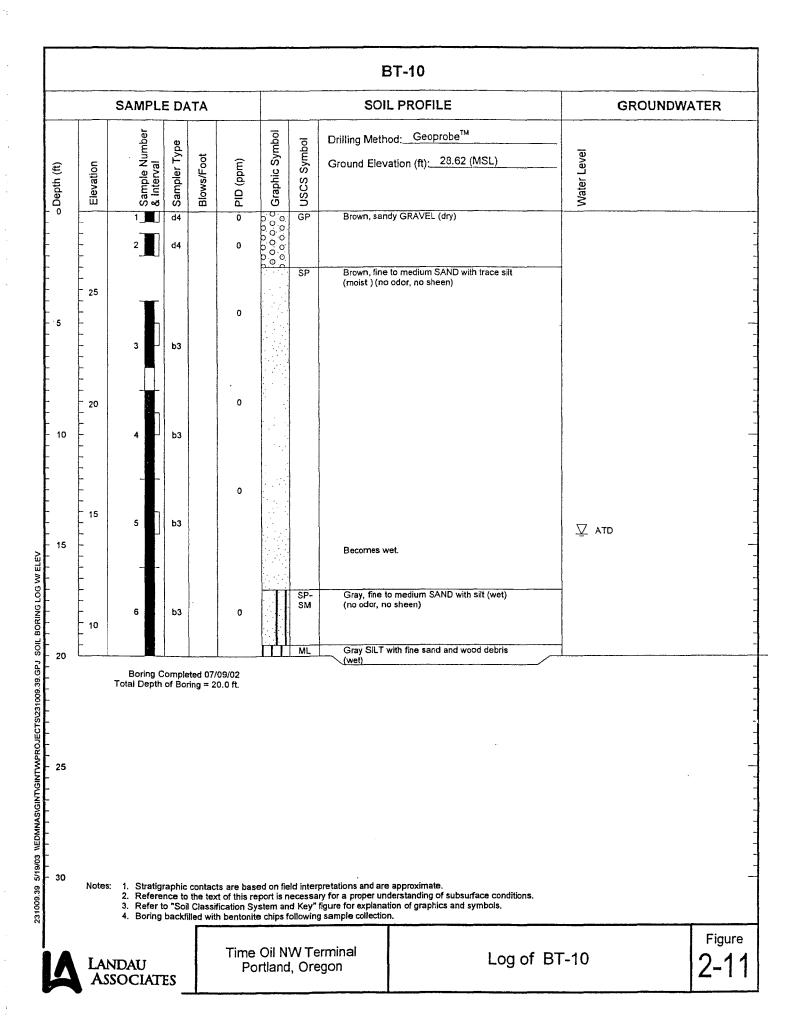
**BT-03 SOIL PROFILE** SAMPLE DATA **GROUNDWATER** Drilling Method: Geoprobe™ Sample Number & Interval Graphic Symbol **USCS Symbol** Sampler Type Water Level Blows/Foot Ground Elevation (ft): 28.32 (MSL) PID (ppm) Depth (ft) 000 d4 Brown, sandy GRAVEL (dry) Brown, fine to medium SAND (moist) (no 0 odor, no sheen) 25 0 5 b3 20 0 ь3 10 Becomes wet 15 Gray, fine to medium SAND with silt (wet) (strong petroleum-like odor, no sheen) SP-SM b3 791 15 231009.39 5/19/03 NEDMNAS/GINT/GINTWPROJECTS/231009.39.GPJ SOIL BORING LOG W/ ELEV Gray, sandy SILT (wet) (mild petroleum-like odor, no sheen) ML b3 116 10 Boring Completed 07/08/02 Total Depth of Boring = 20.0 ft. 1. Stratigraphic contacts are based on field interpretations and are approximate. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
 Boring backfilled with bentonite chips following sample collection. Figure Time Oil NW Terminal Log of BT-03 2-4 LANDAU ASSOCIATES Portland, Oregon

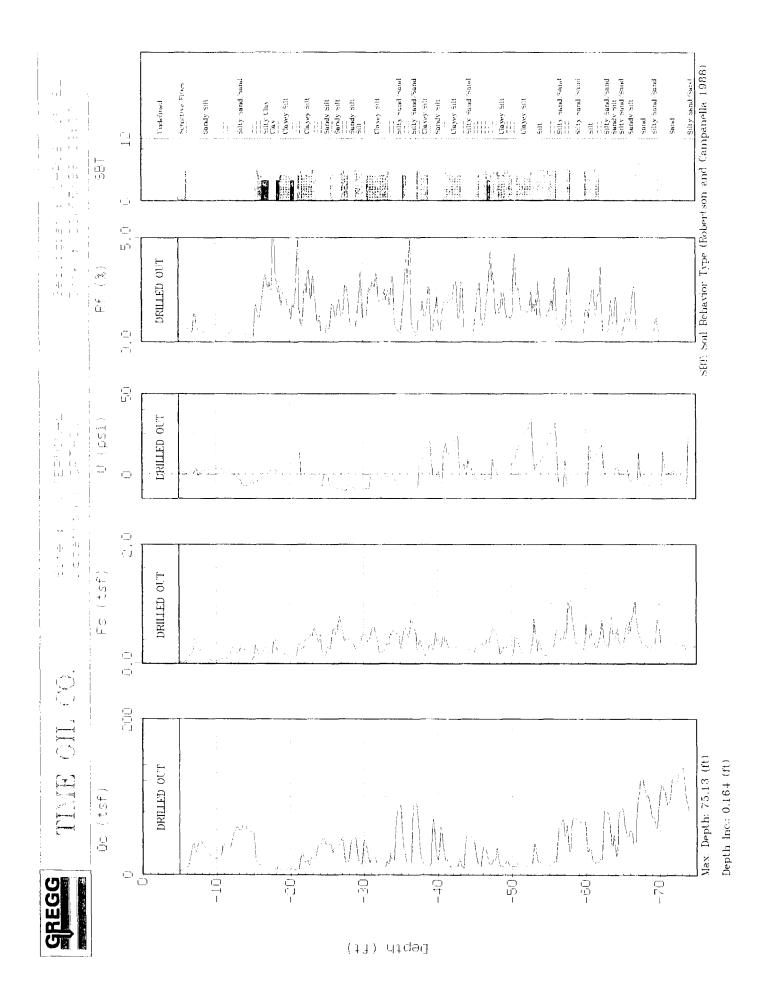


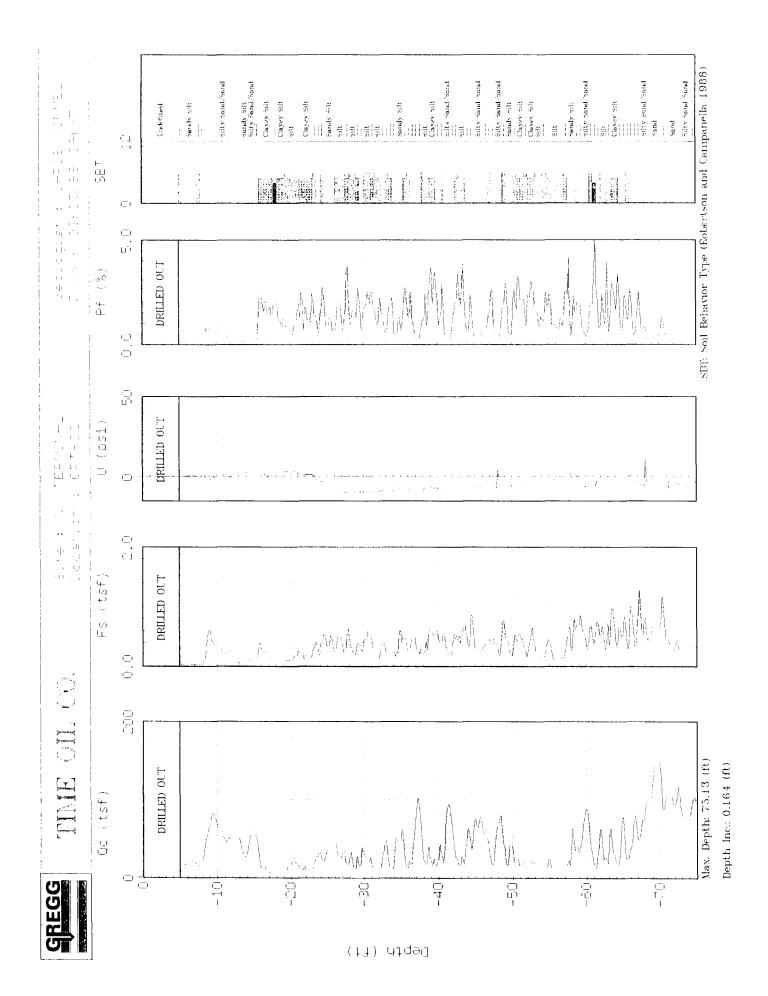


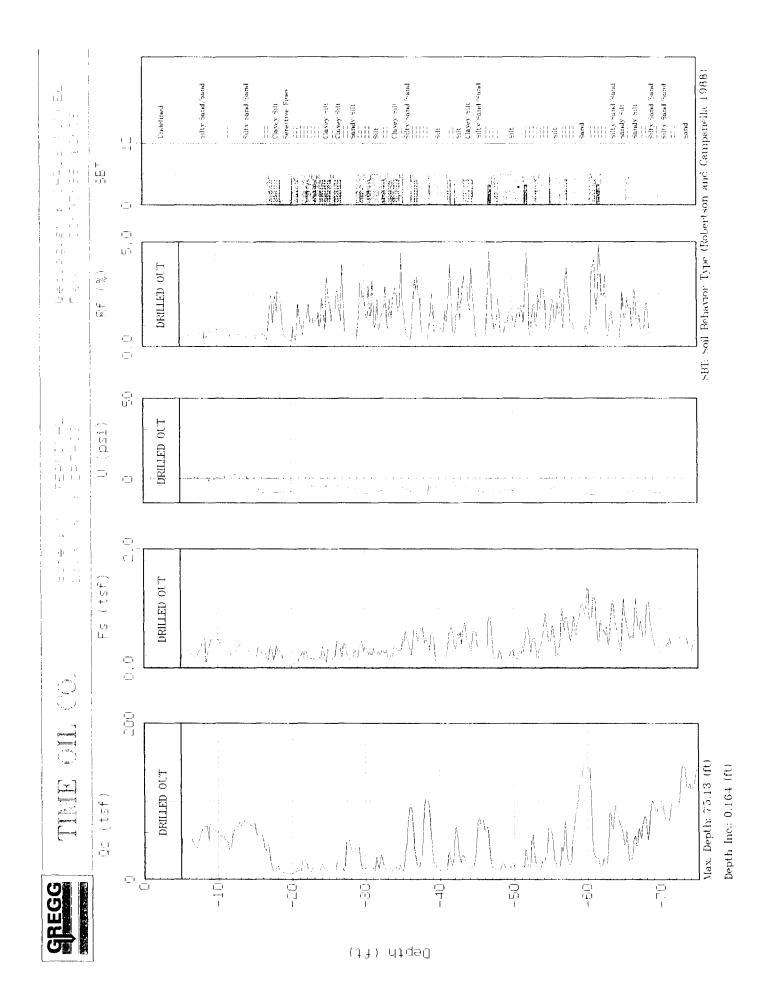
		SAMPL	E DA	TA				SOIL		GROUNDWATER		
o Depuit (it)	Elevation	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	[	d: Geoprobe <sup>™</sup> tion (ft): 28.20 (MSL)	Mater I evel		
Ō		1	d4		0	000	GP		y GRAVEL (dry)			
5	25	3	d4		0		SP	Brown, fine t odor, no she	o medium SAND (moist) (no en)			
10	20	4	<b>b</b> 3		0							
15	15	5	b3		0		SP- SM	Becomes we Gray, fine to (mild petrole	et. medium SAND with silt (wet) um-like odor, no sheen)	Ž	_ ATD	
20	10	6	b3		0		ML	Gray SILT w	ith fine sand (wet)			
		Boring C Total Depth	Comple of Bor	ted 07/0 ing = 20	08/02 0.0 ft.							
25												
30	Notes	<ol> <li>Refere</li> <li>Refer t</li> </ol>	nce to to "Soil	the text	t of this re ication Sy	port is n	ecessa d Key"	pretations and are ry for a proper und figure for explanati g sample collection	erstanding of subsurface cond on of graphics and symbols.	itions.		
_	<b>-</b>	NDAU SOCIAT			Time	Oil N'	W Te	erminal		of BT-07		Figu 2-



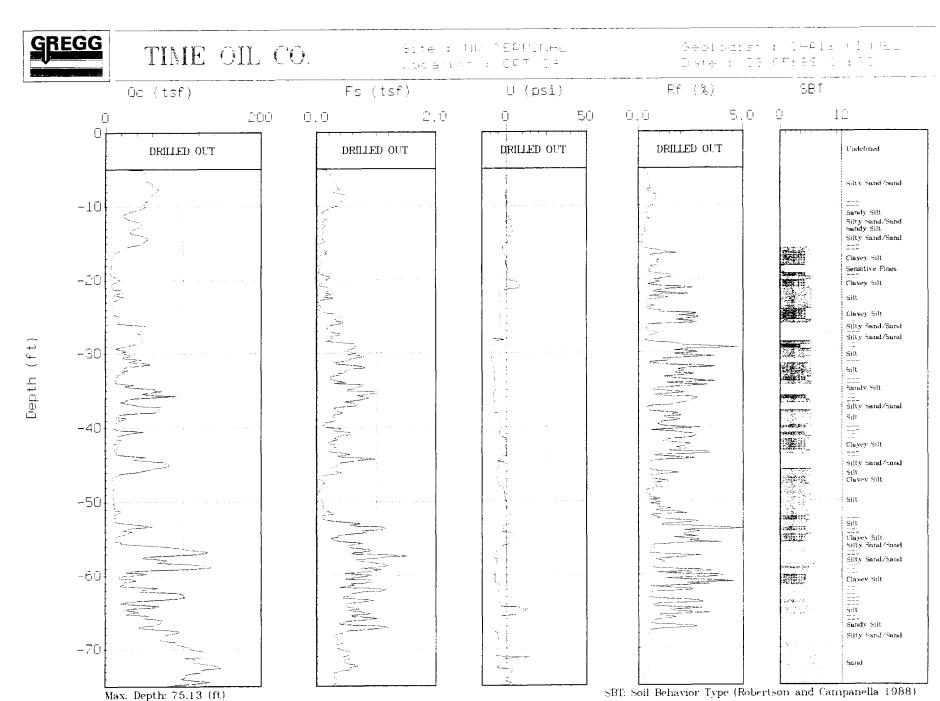




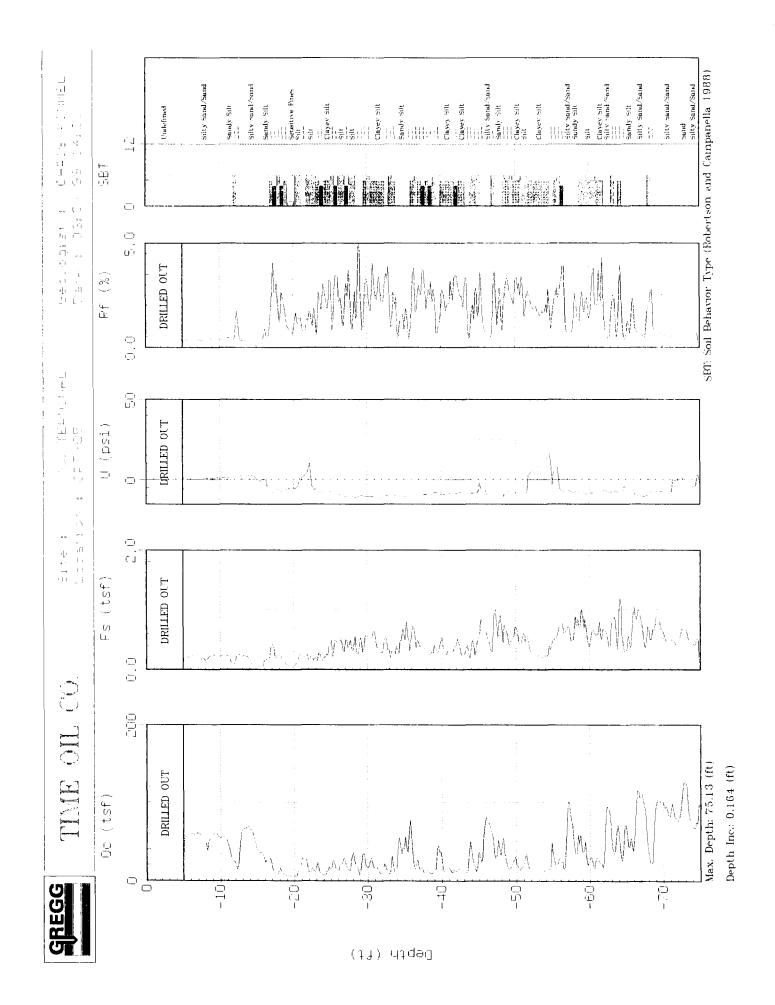


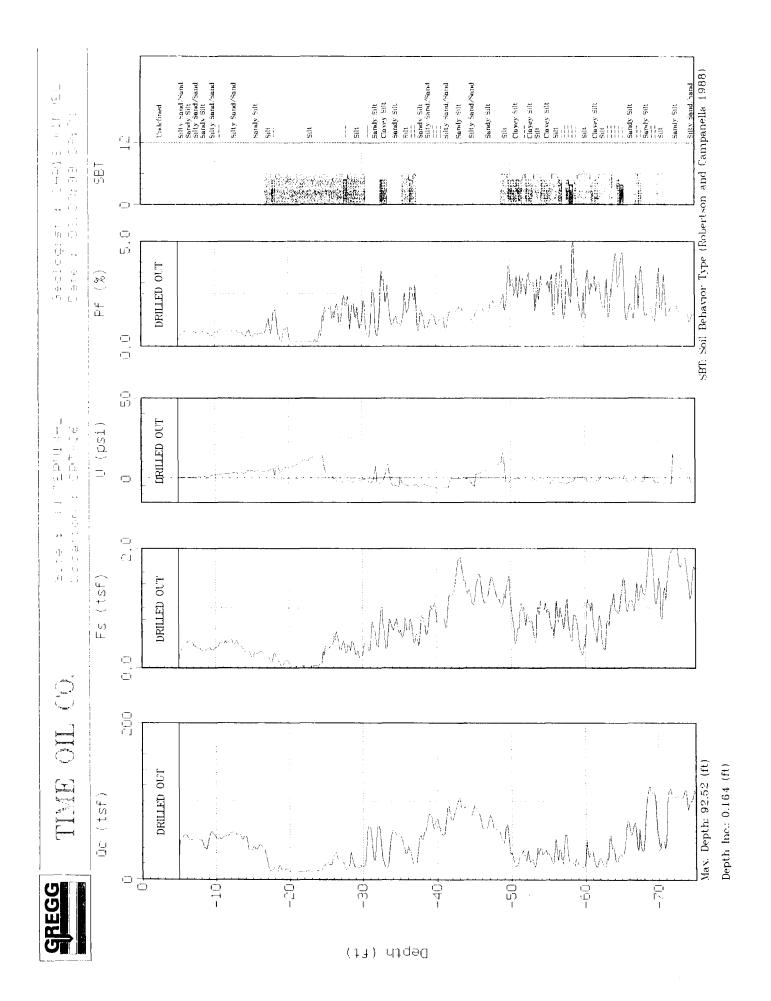


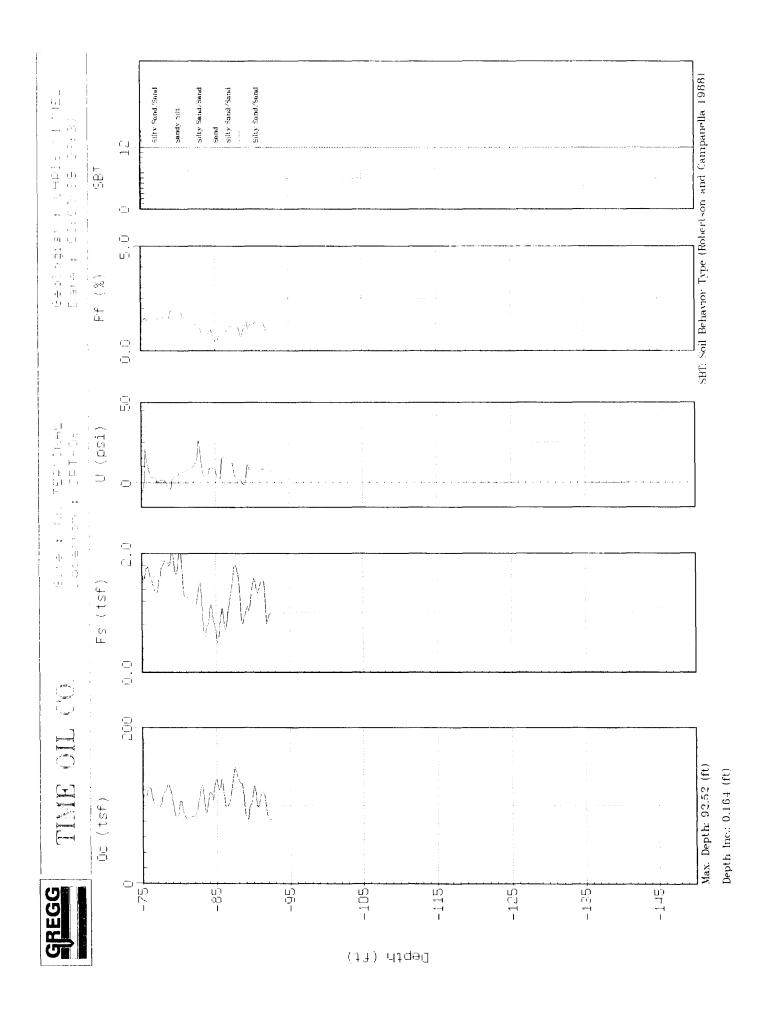
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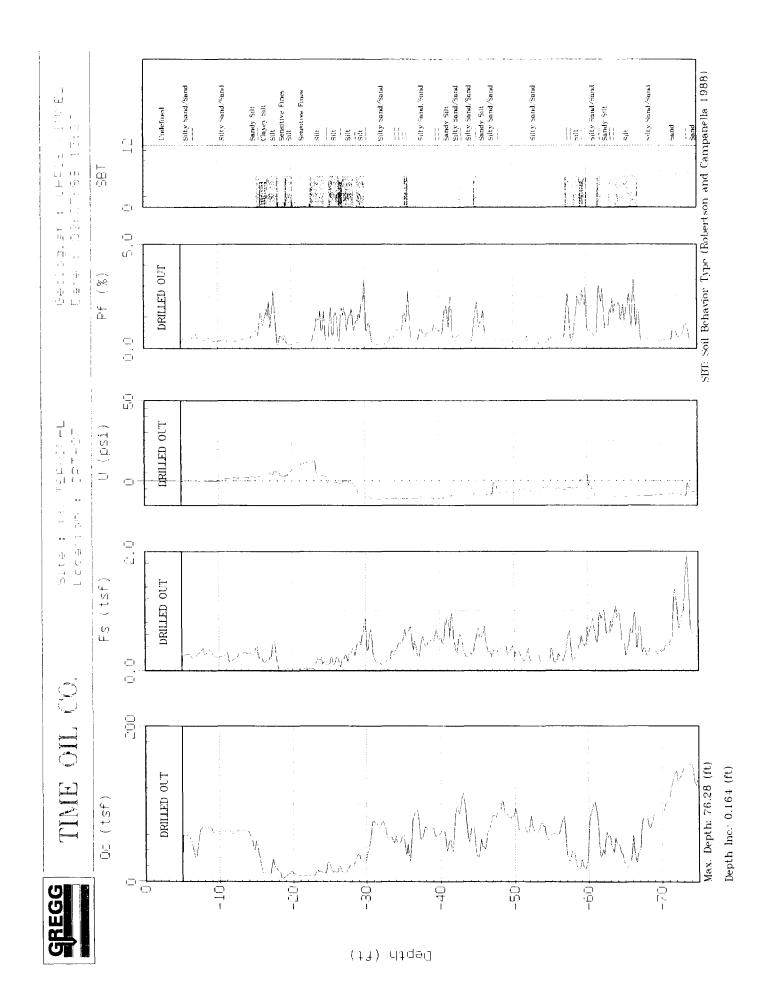


Depth Inc.: 0.164 (ft)

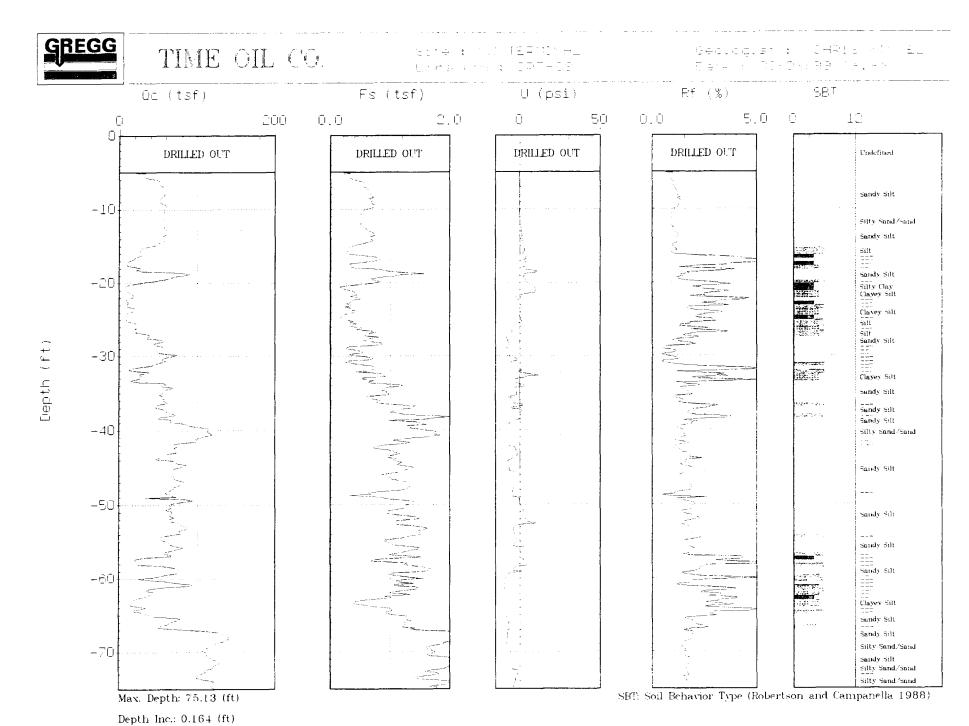






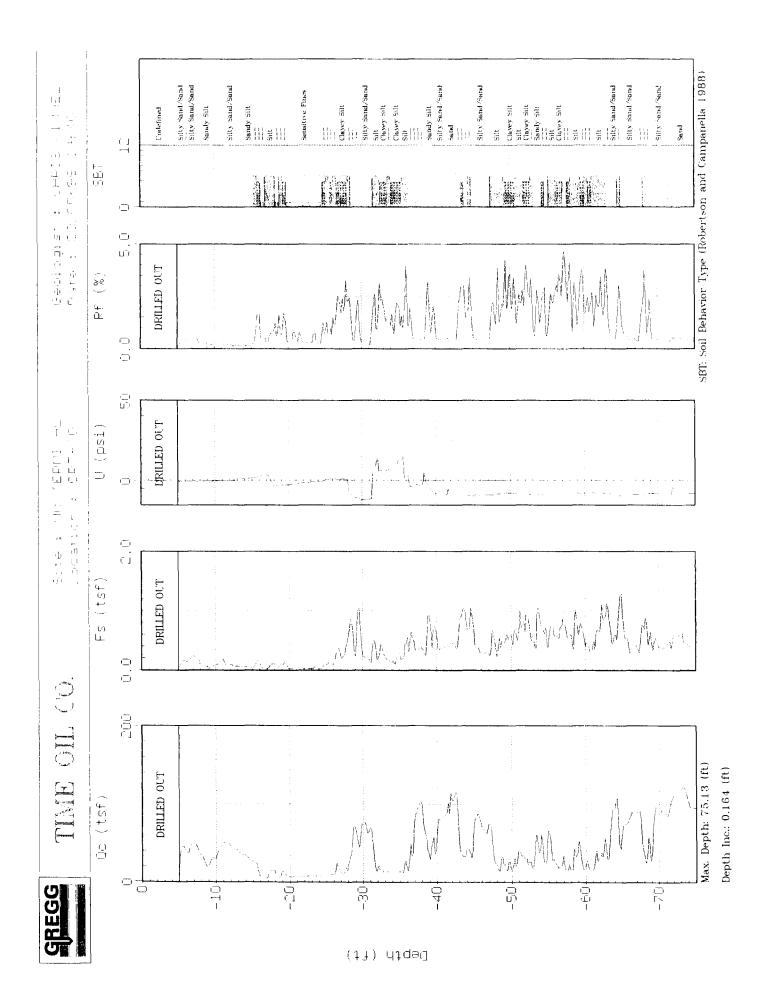


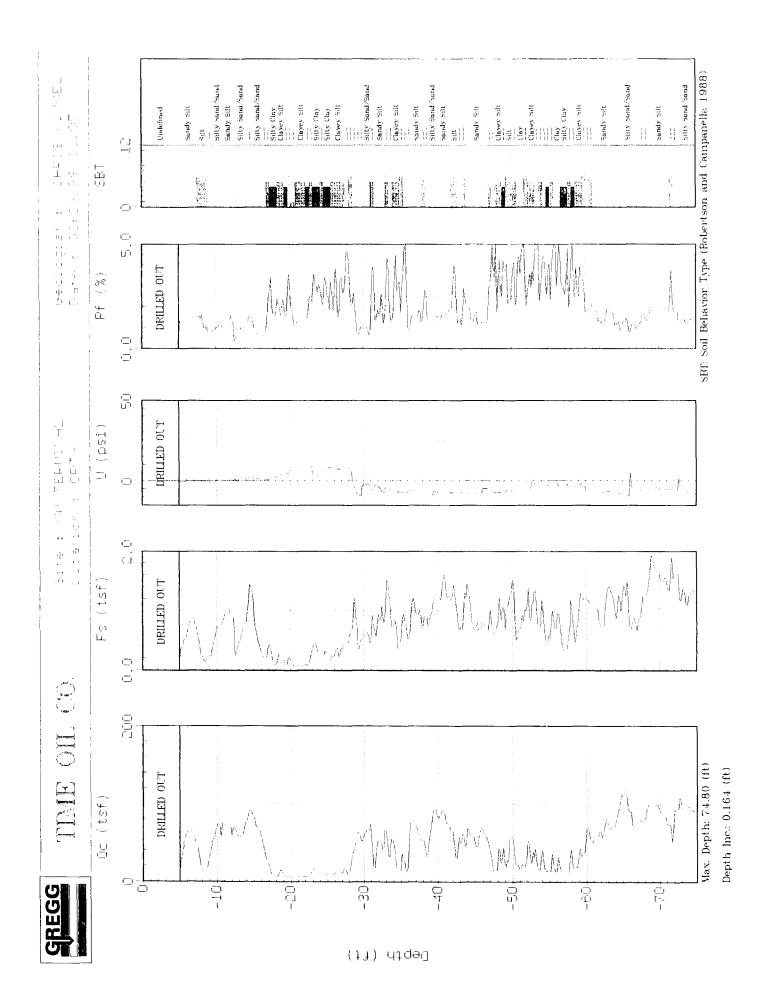
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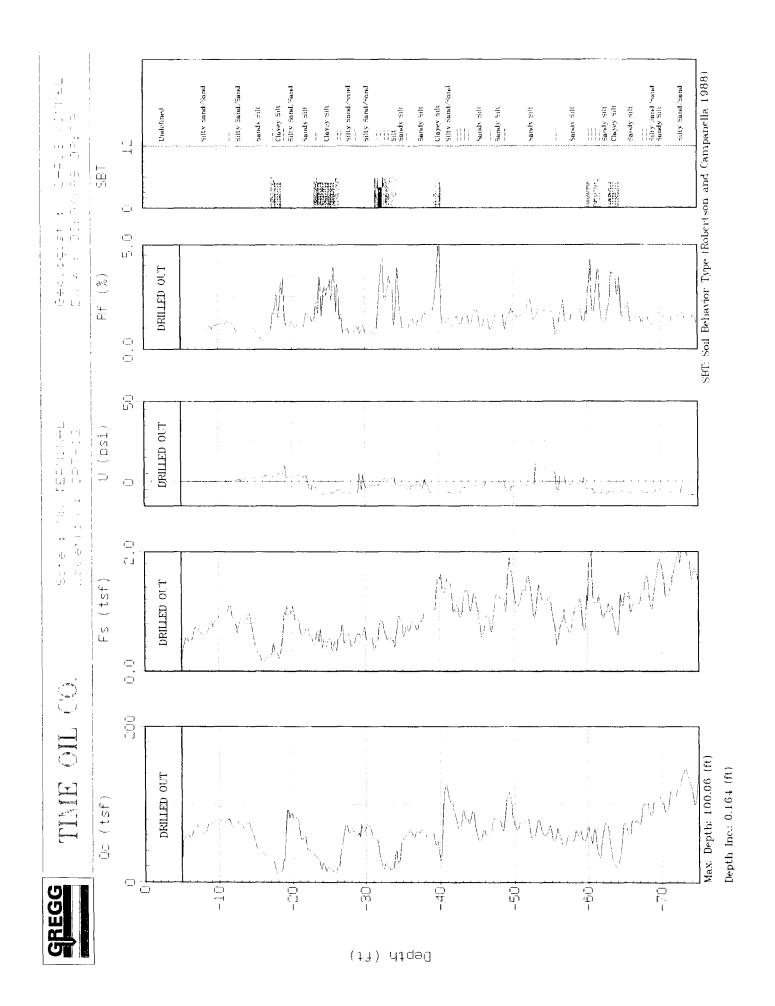


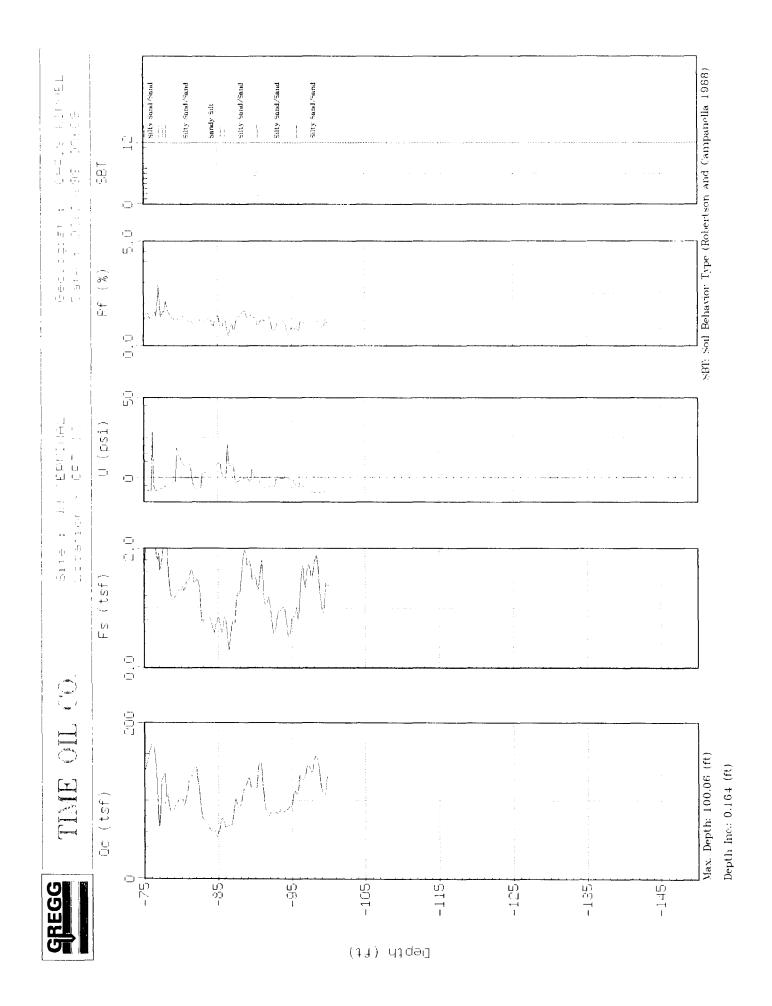
SBT: Soil Behavior Type (Robertson and Campanella 1988)

Max. Depth: 75.13 (ft)
Depth Inc.: 0.164 (ft)









SBT

12

Undefined

Sandy Silt

Sandy Silt

Clayer Silt

Sandy Silt

Sandy Silt

Sandy Silt

Sitty Sand/Sand

Sandy Silt

Silty Sand/Sand

Sandy Silt

Sandy Silt Silty Sand/Sand Sandy Silt Silt Sandy Silt Sandy Silt Silt Sandy Silt Silt Sandy Silt Silt Silt Sandy Silt

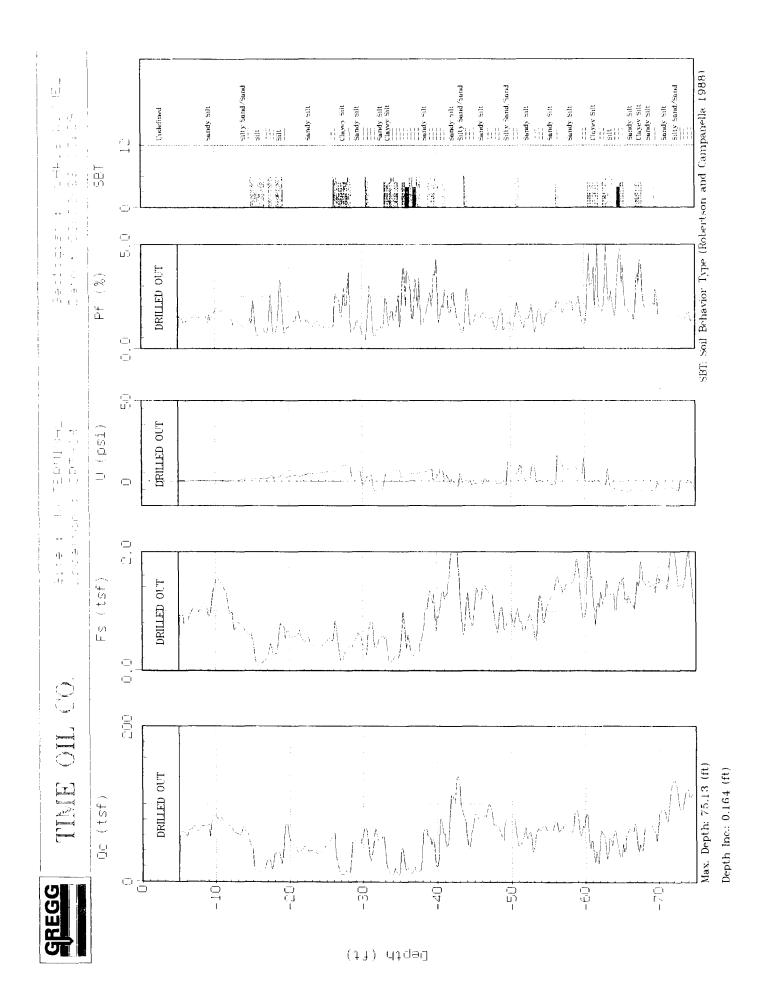
Sandy Silt

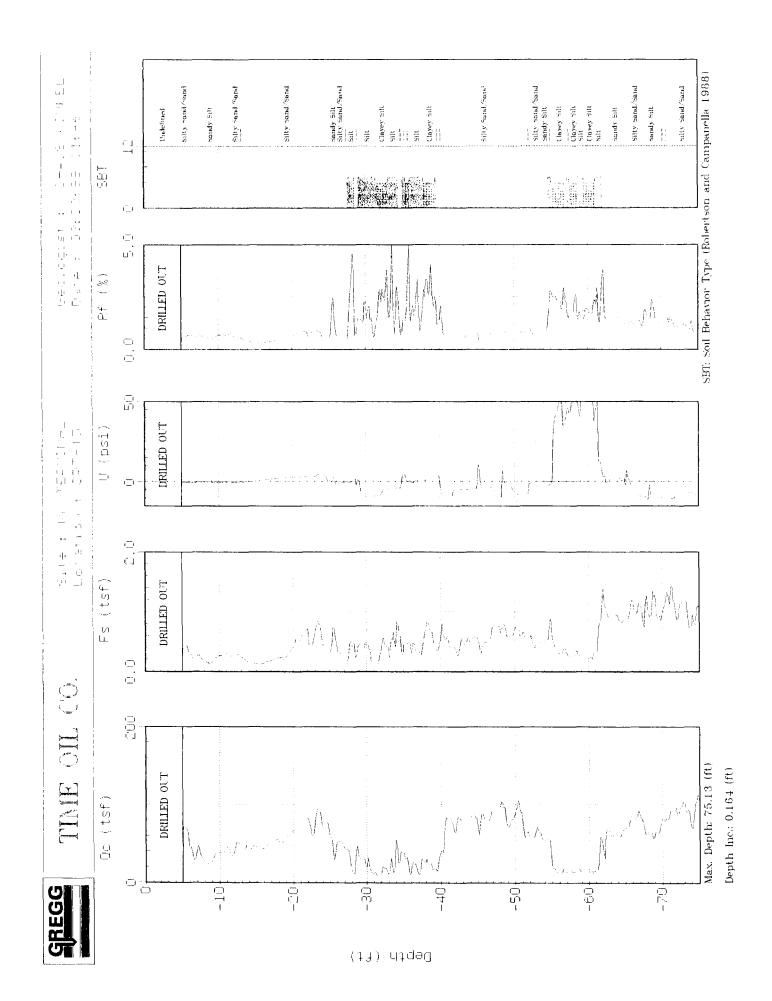
Sandy Silt Sandy Silt Sandy Silt

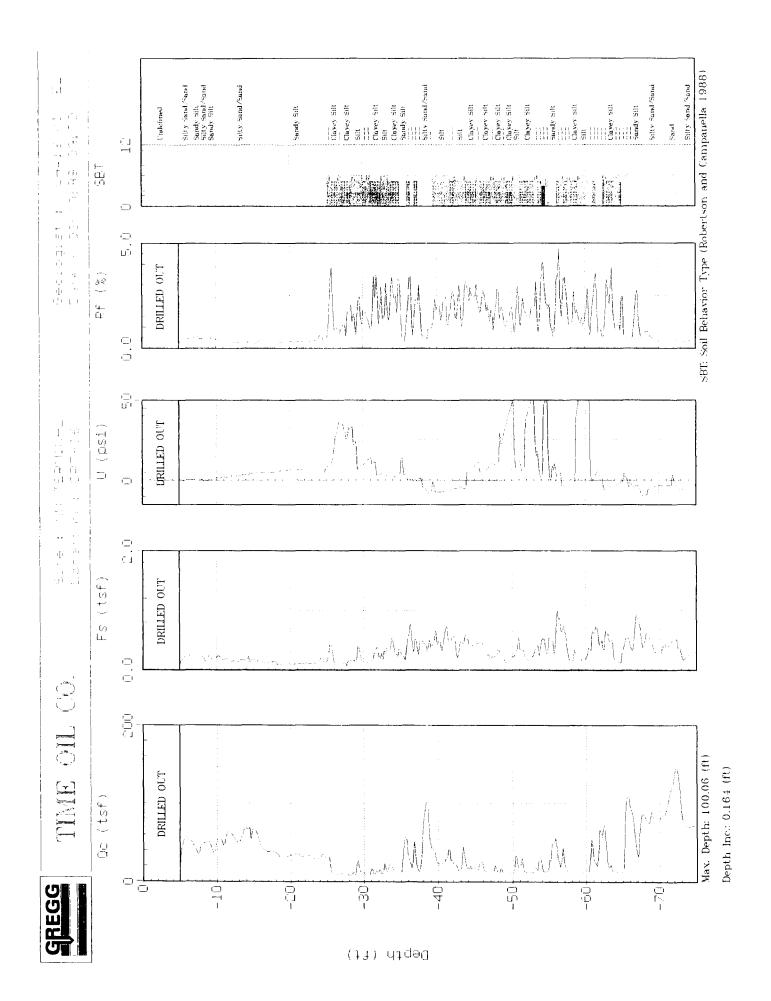
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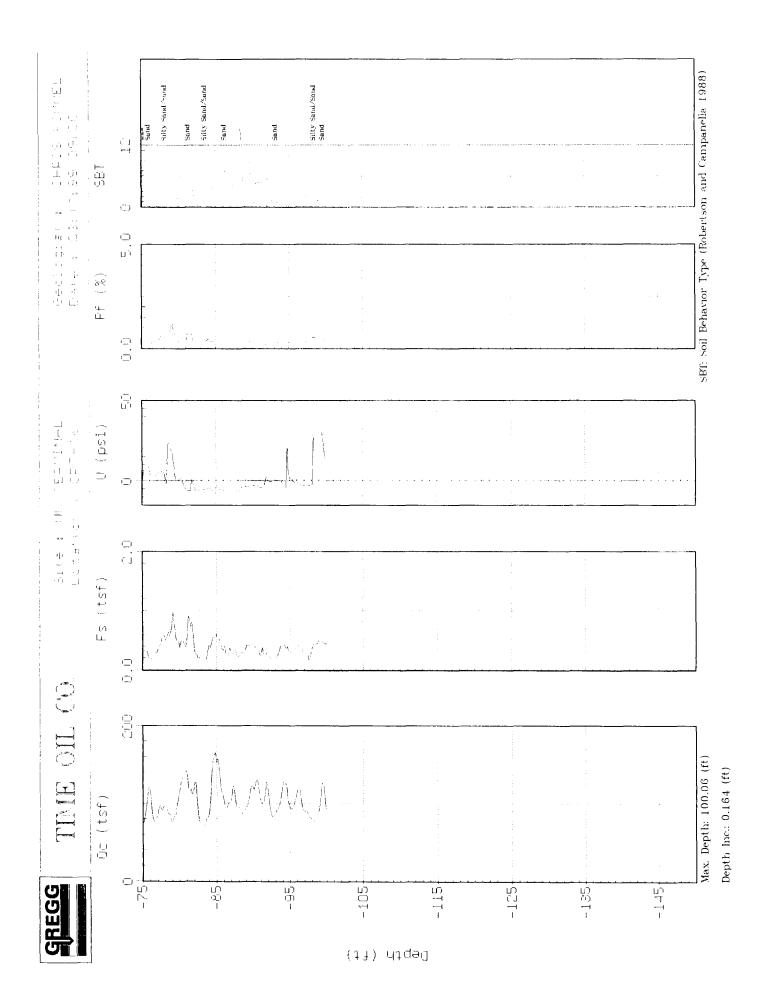
Silty Sand/Sand Silty Sand/Sand Sandy Silt Clayer Silt

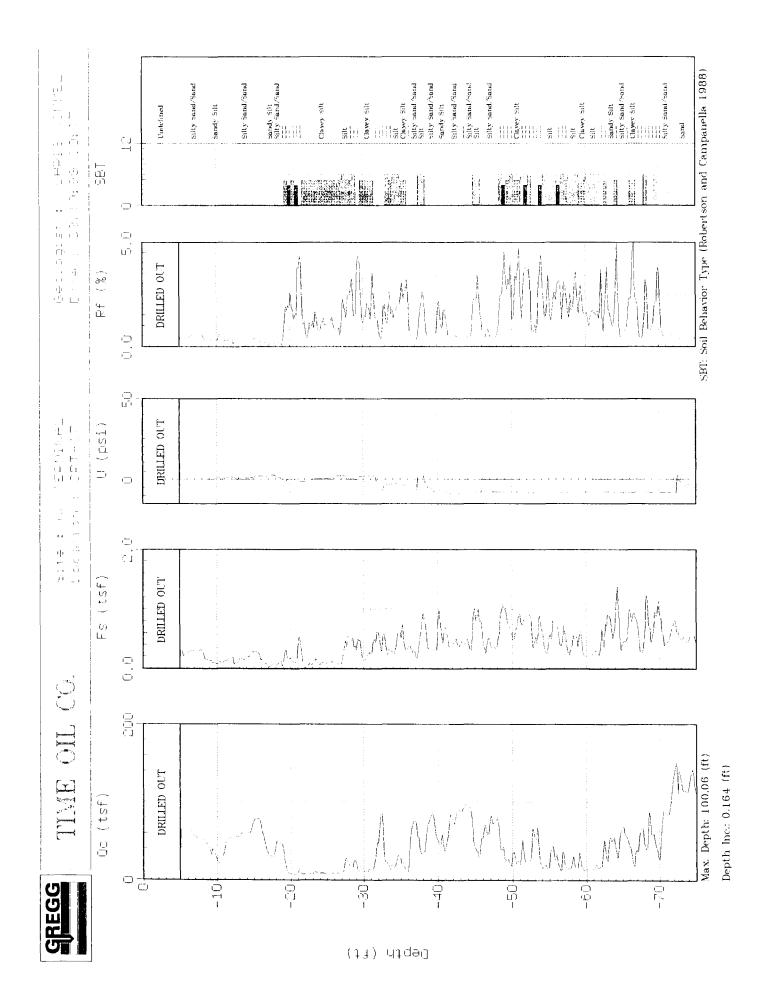
Max. Depth: 75.13 (ft)
Depth Inc.: 0.164 (ft)

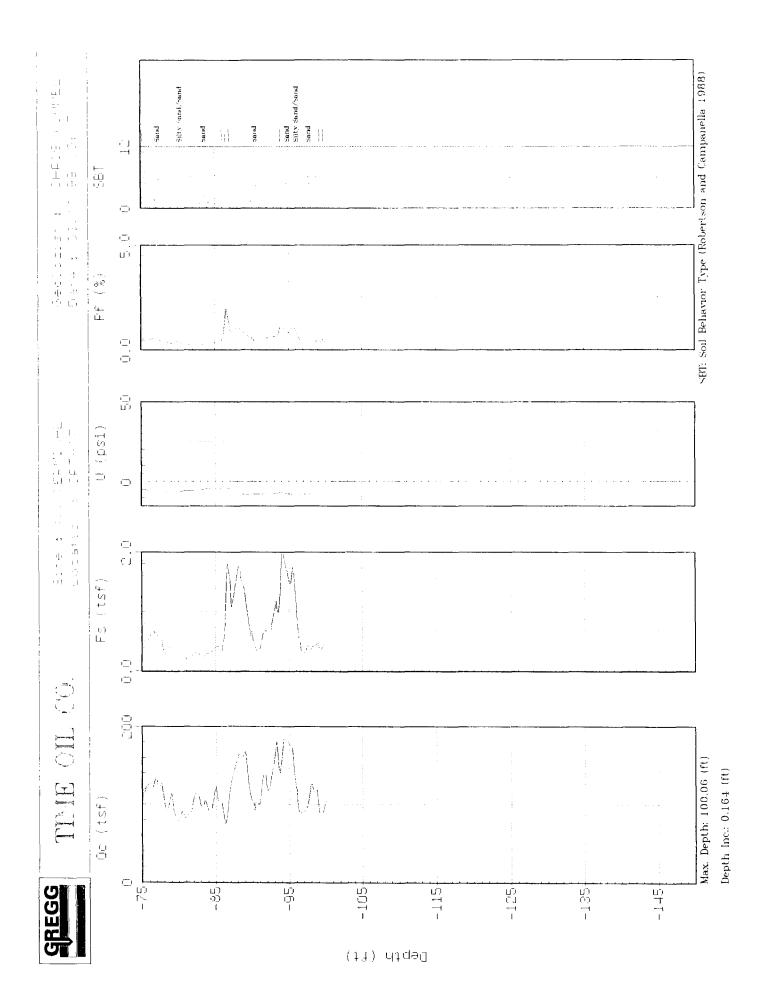




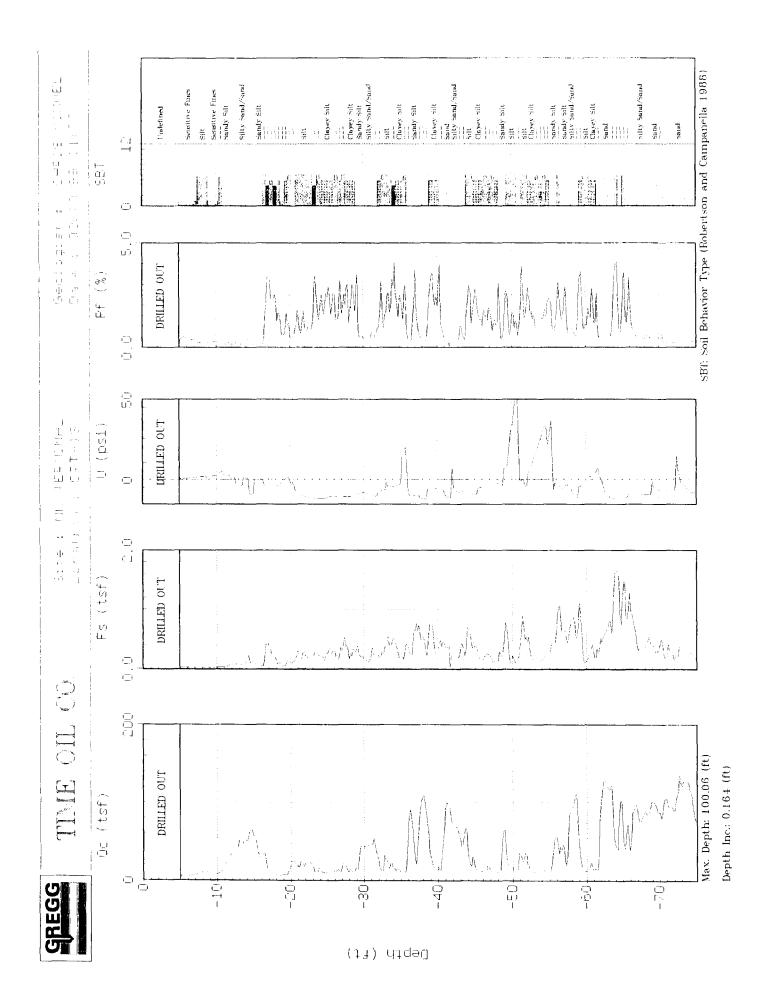


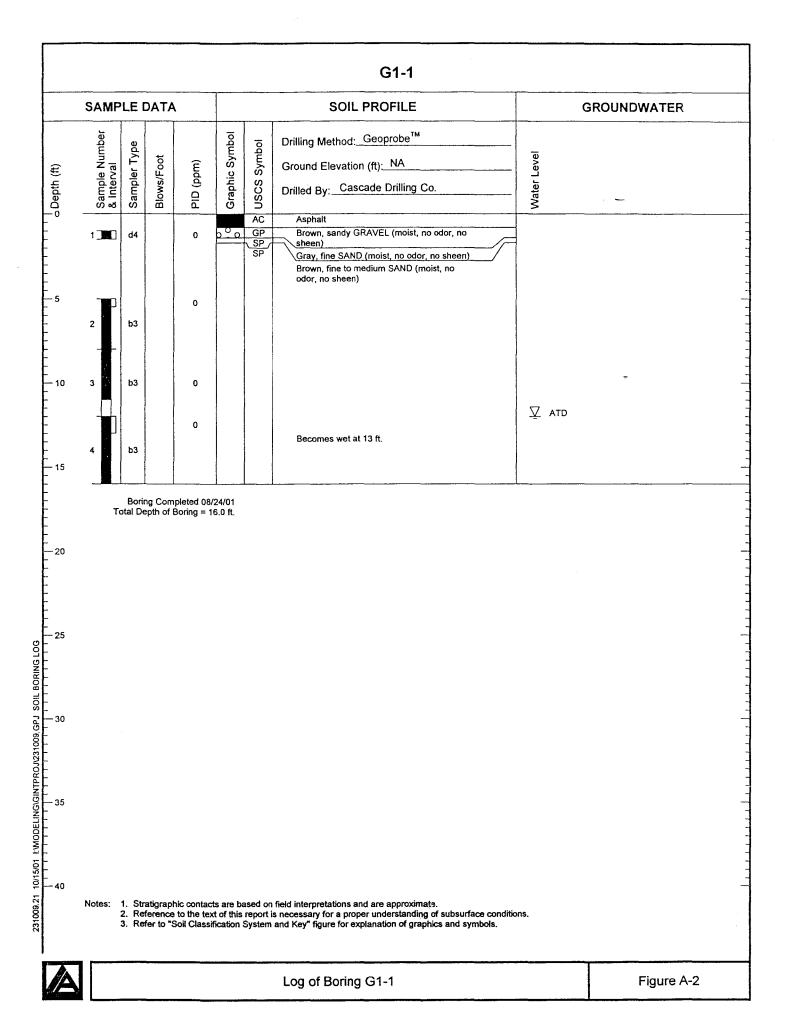


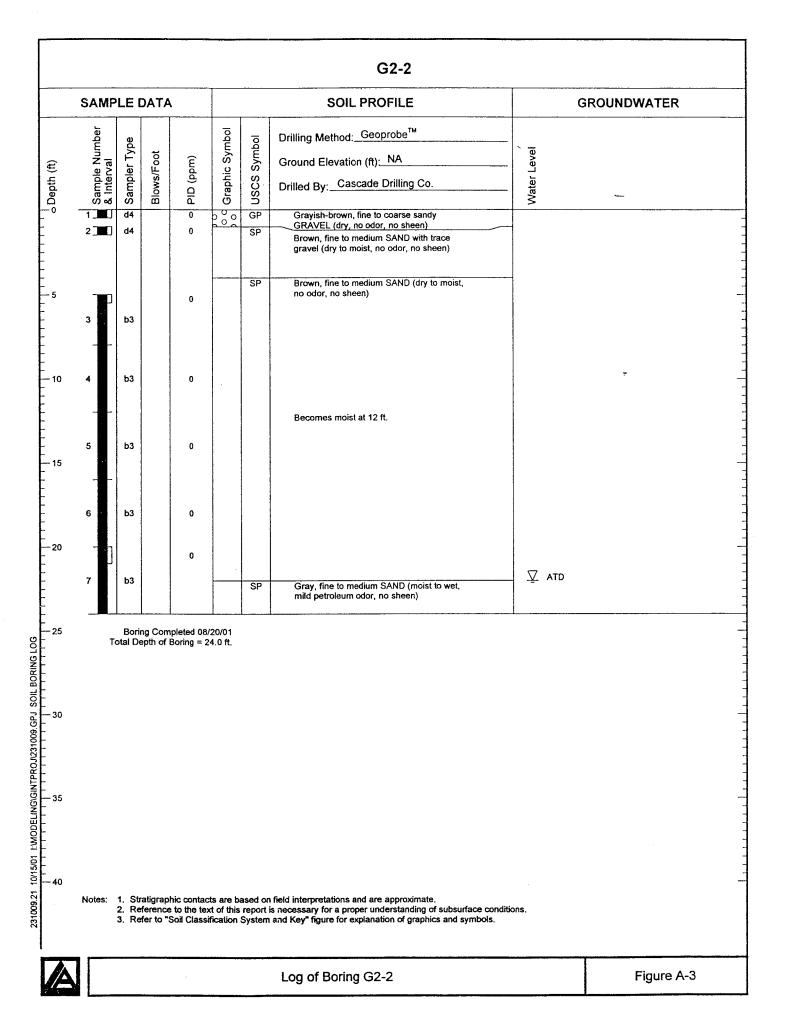


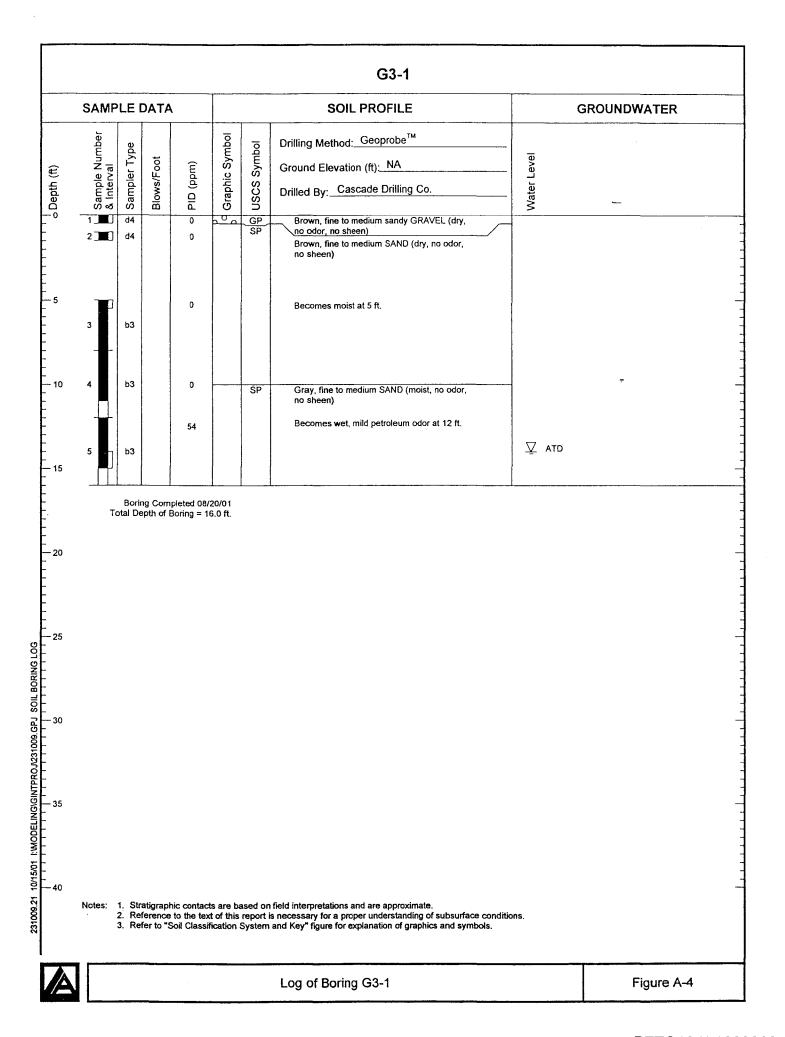


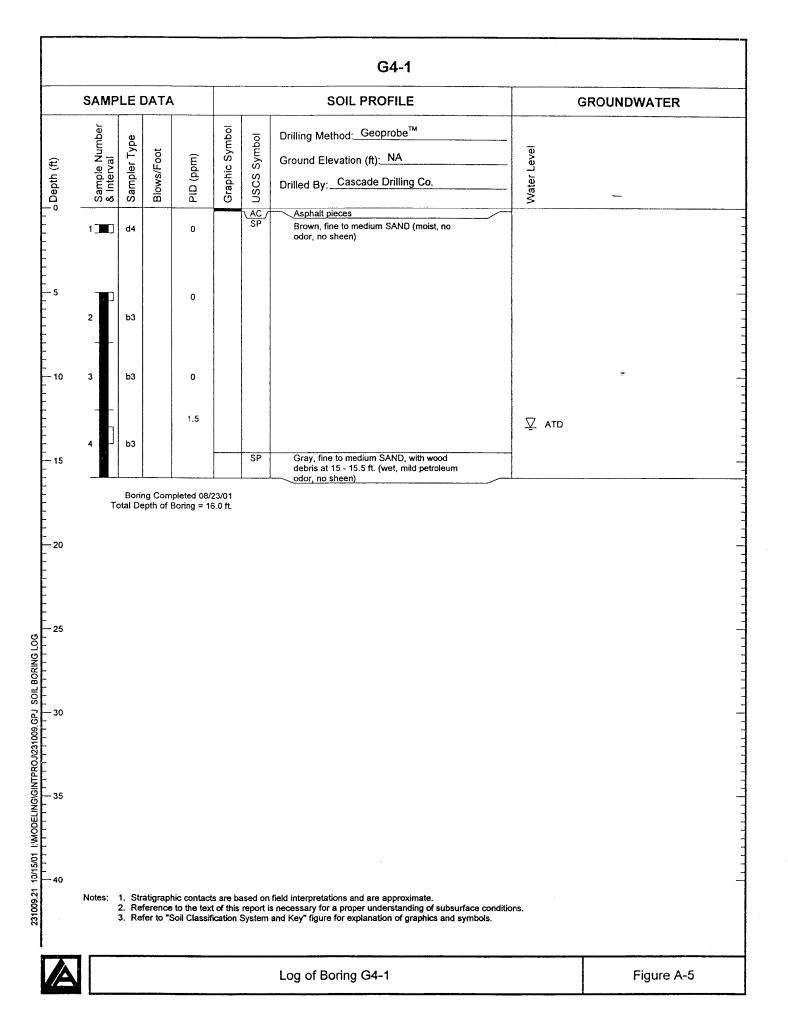
Depth Inc.: 0.164 (ft)

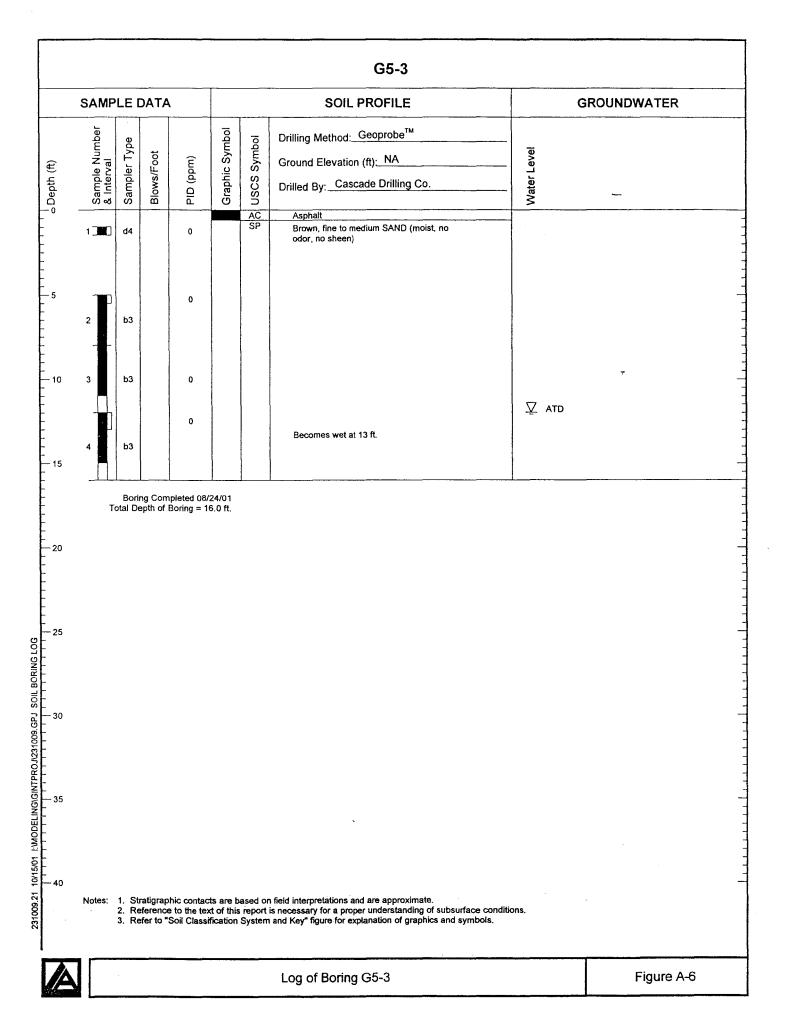


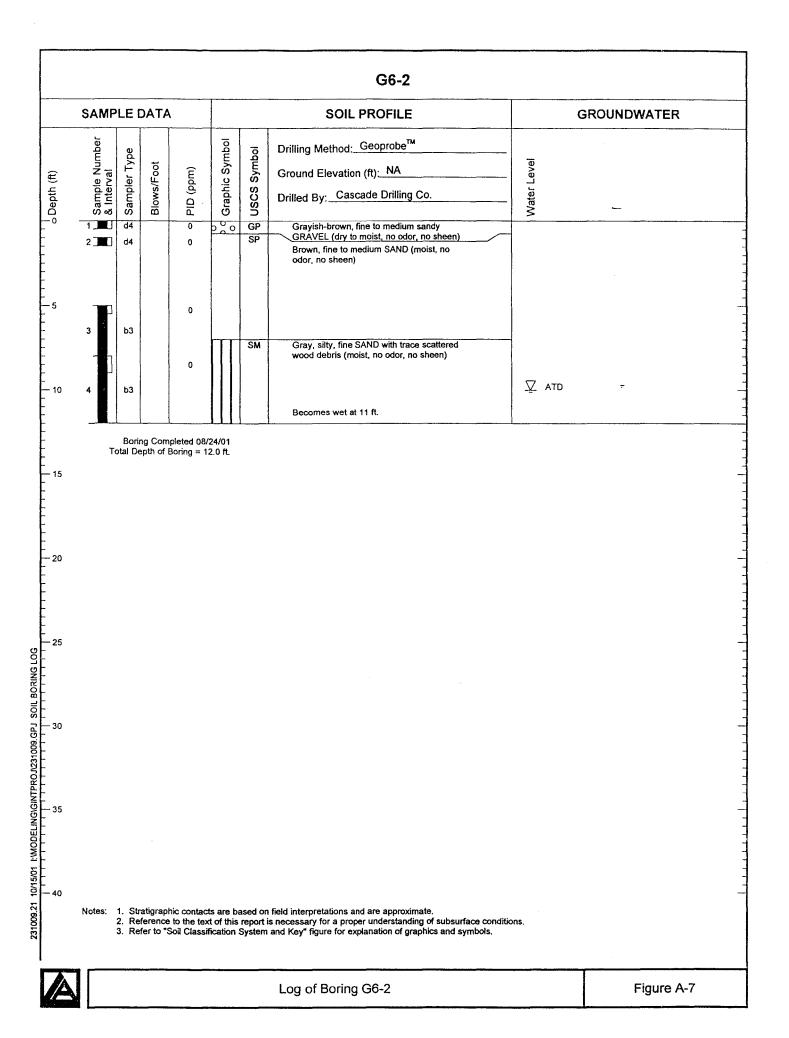


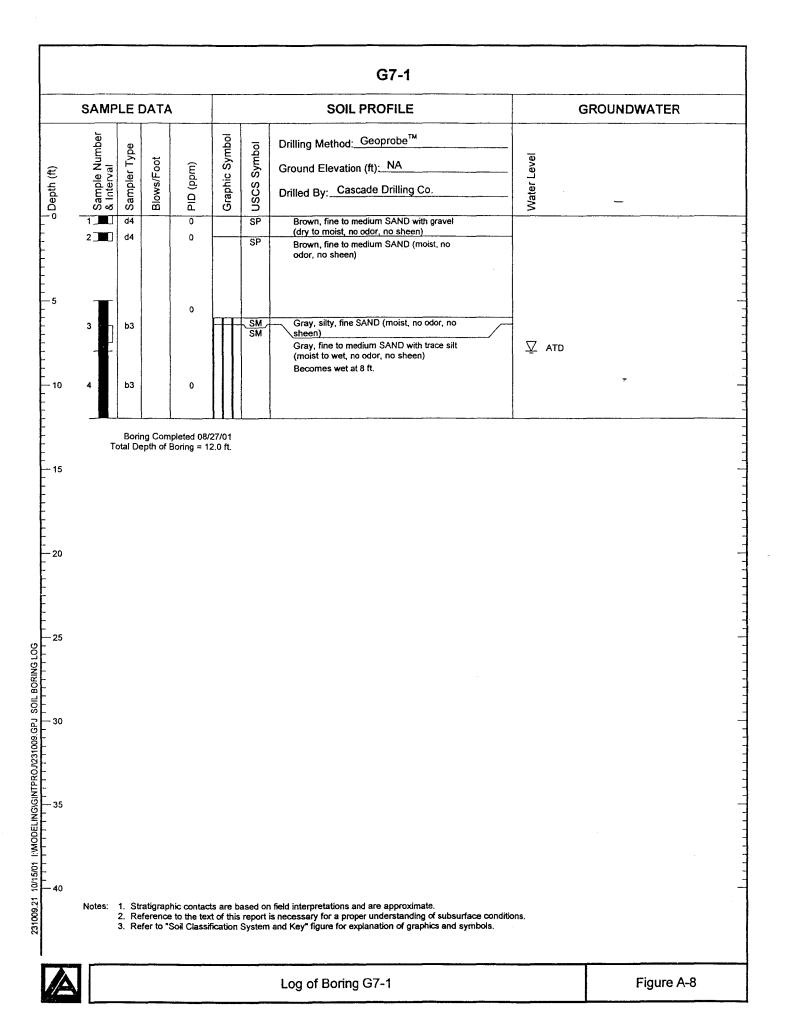


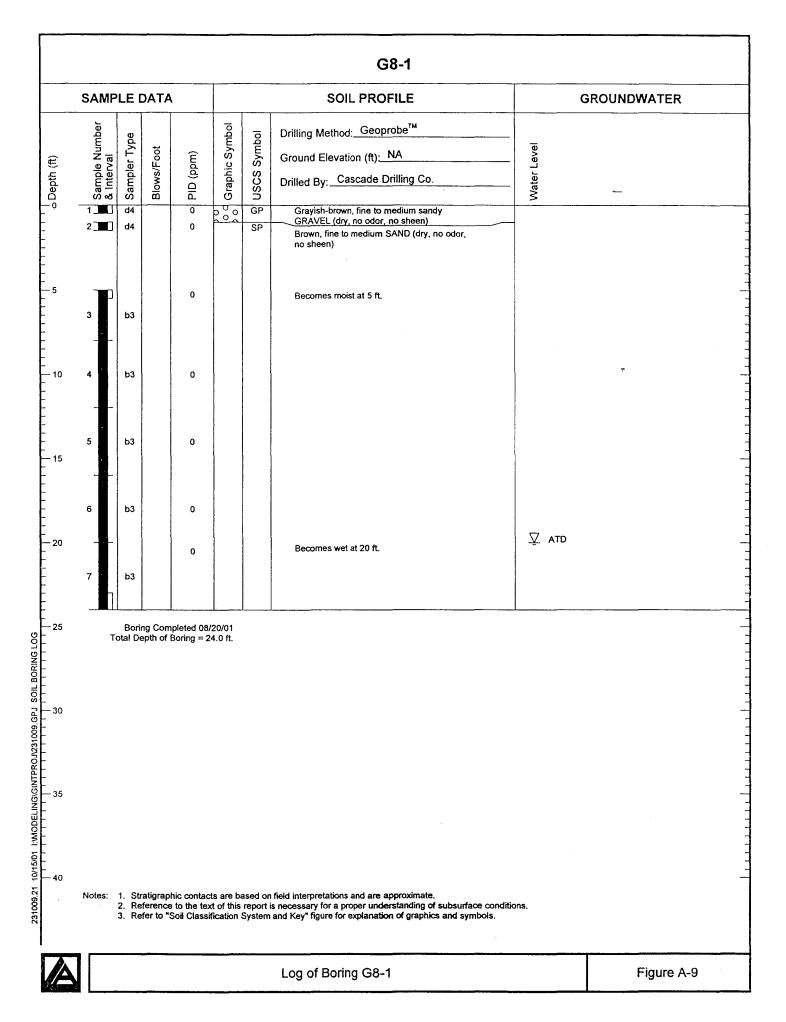


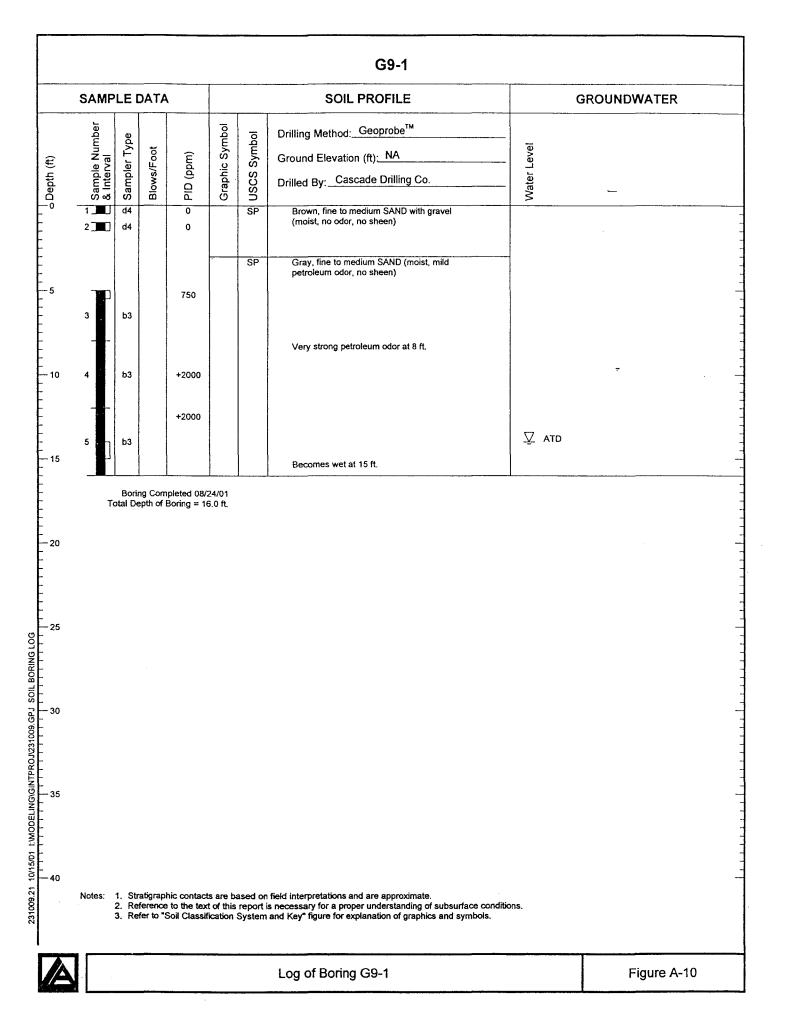


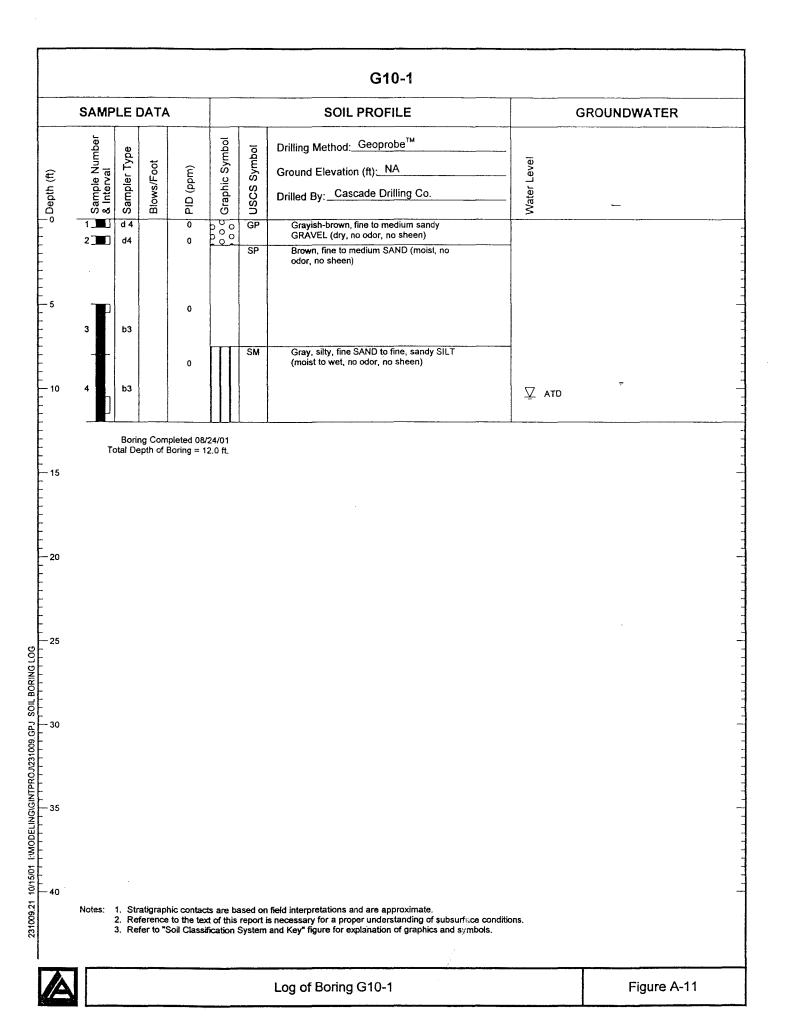


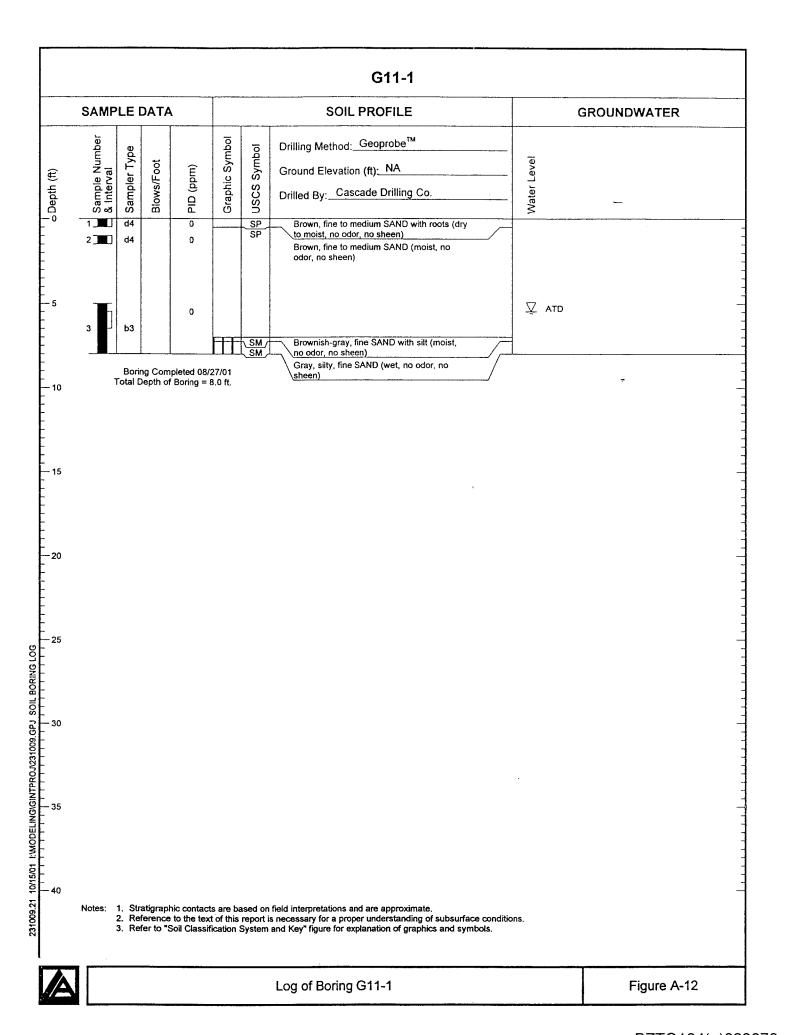


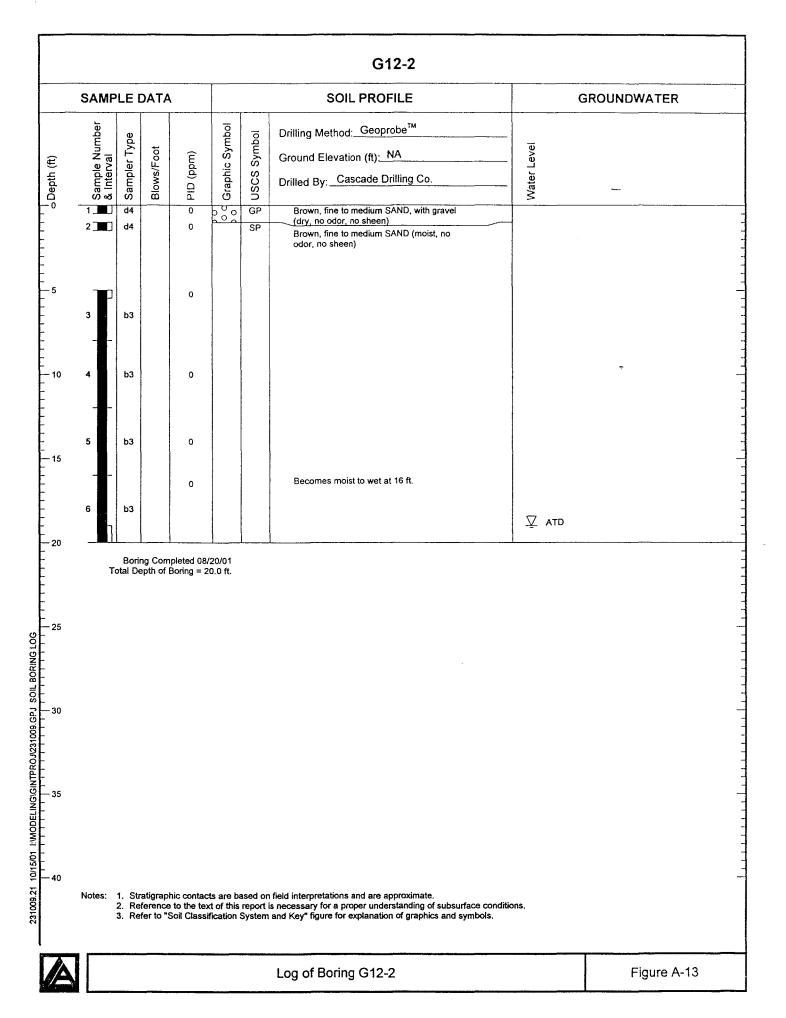


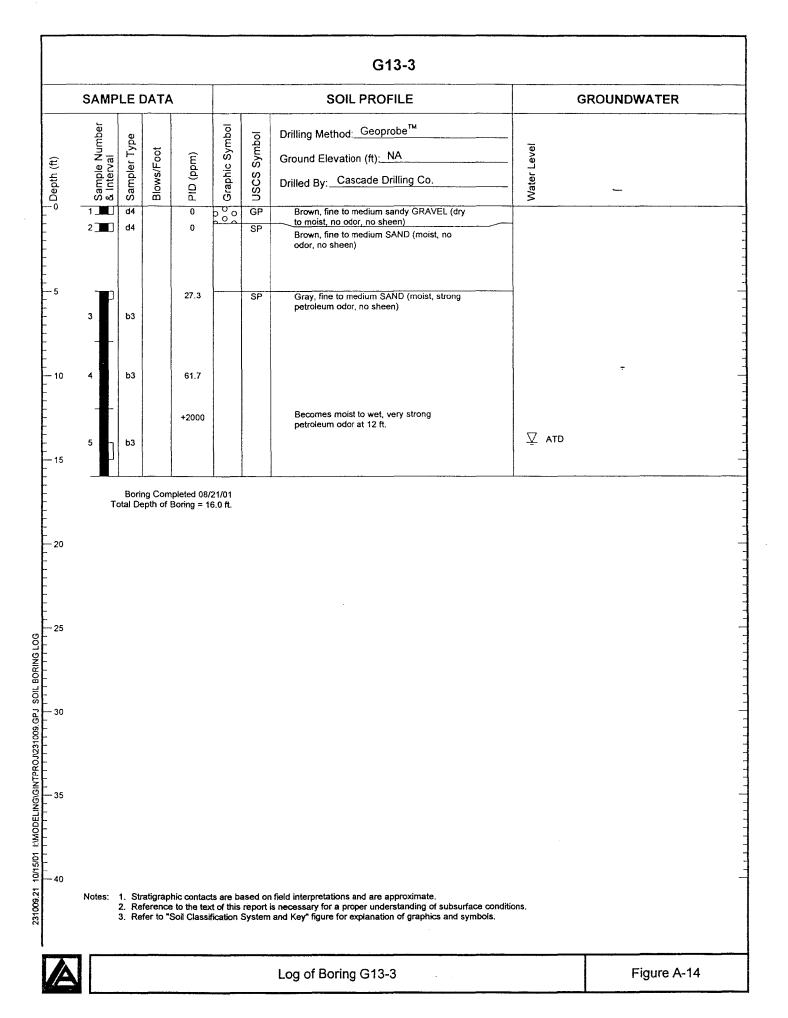


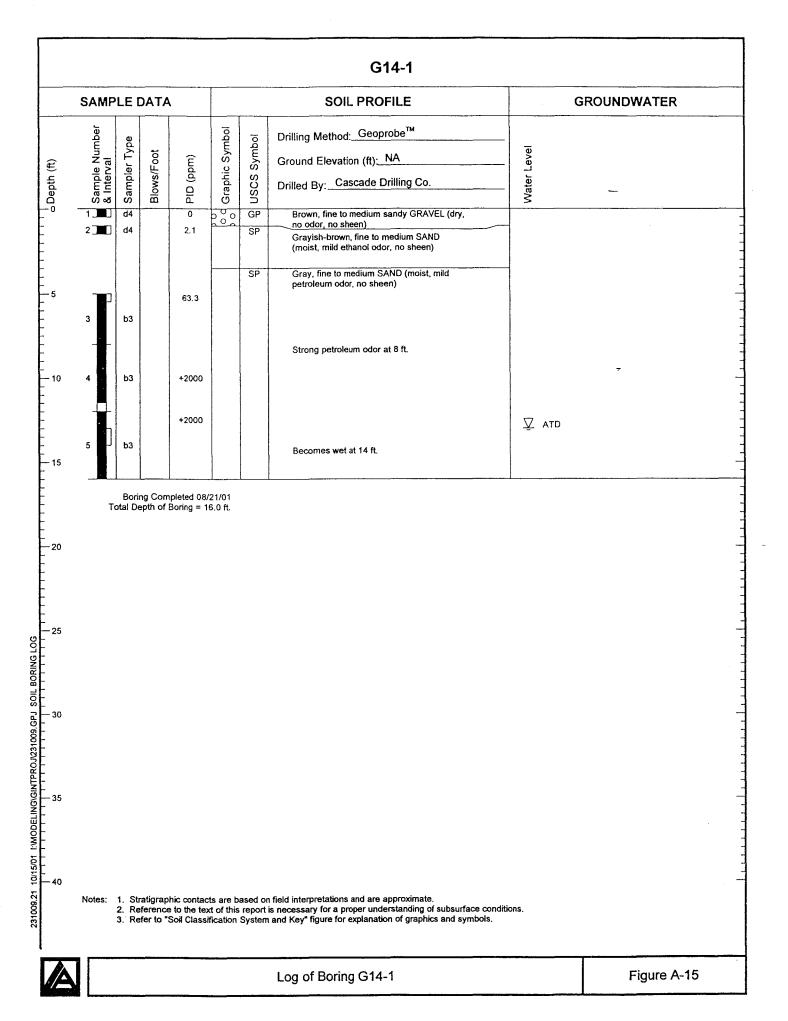


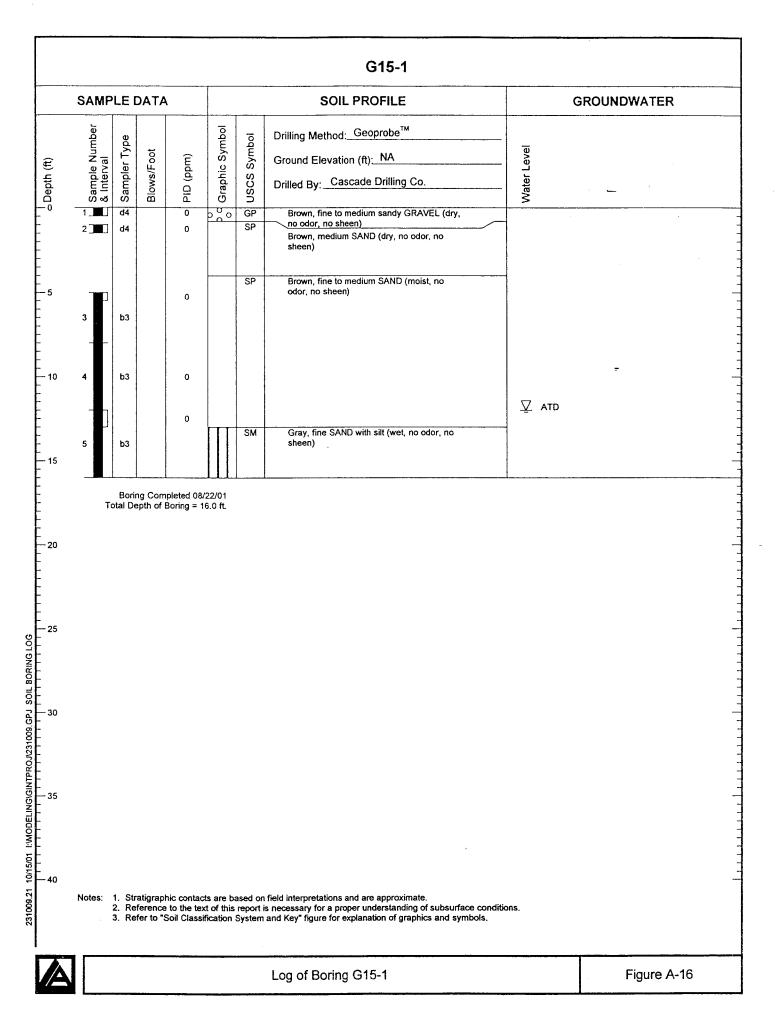


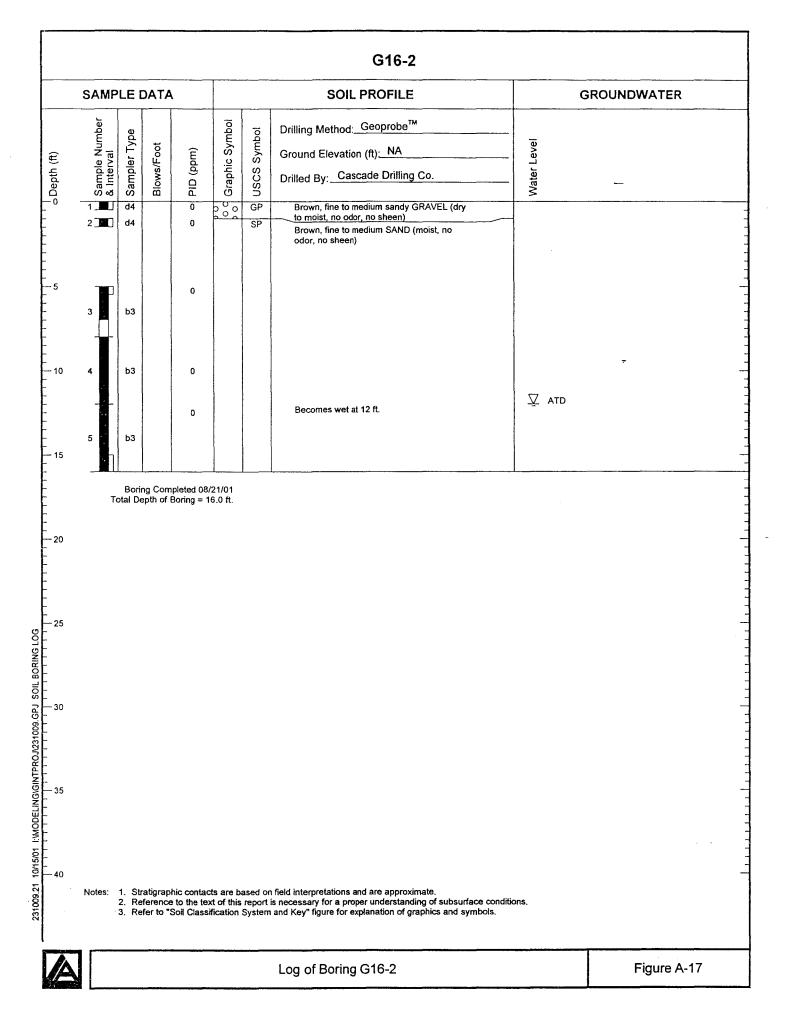


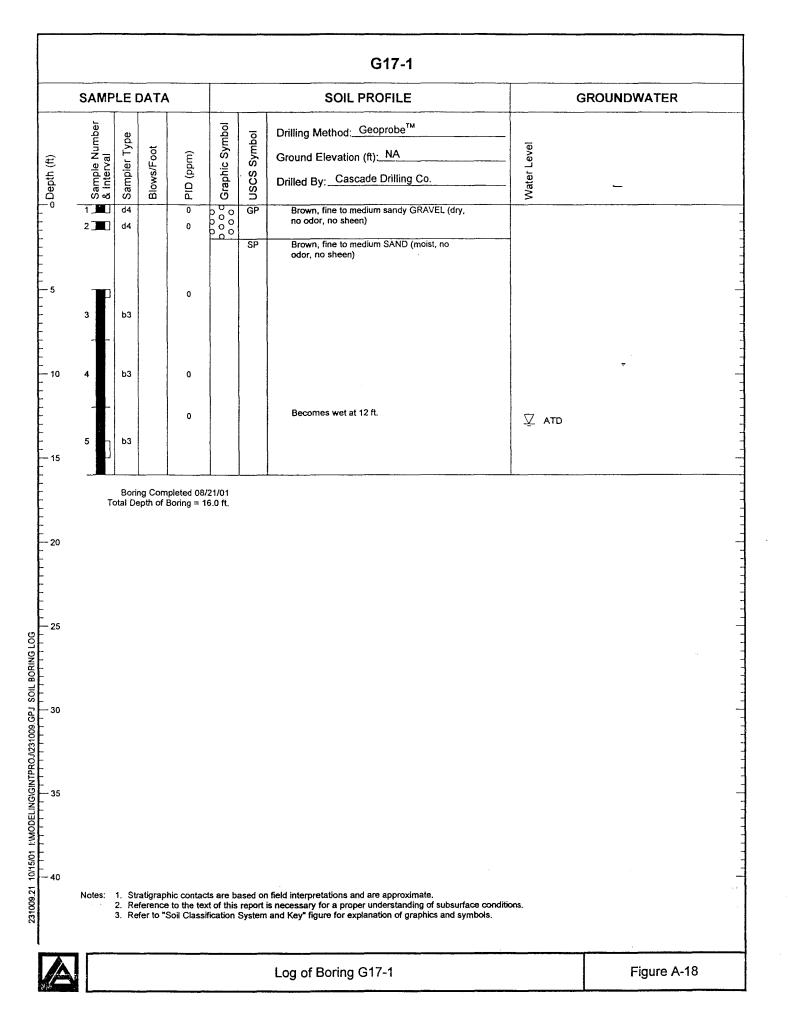


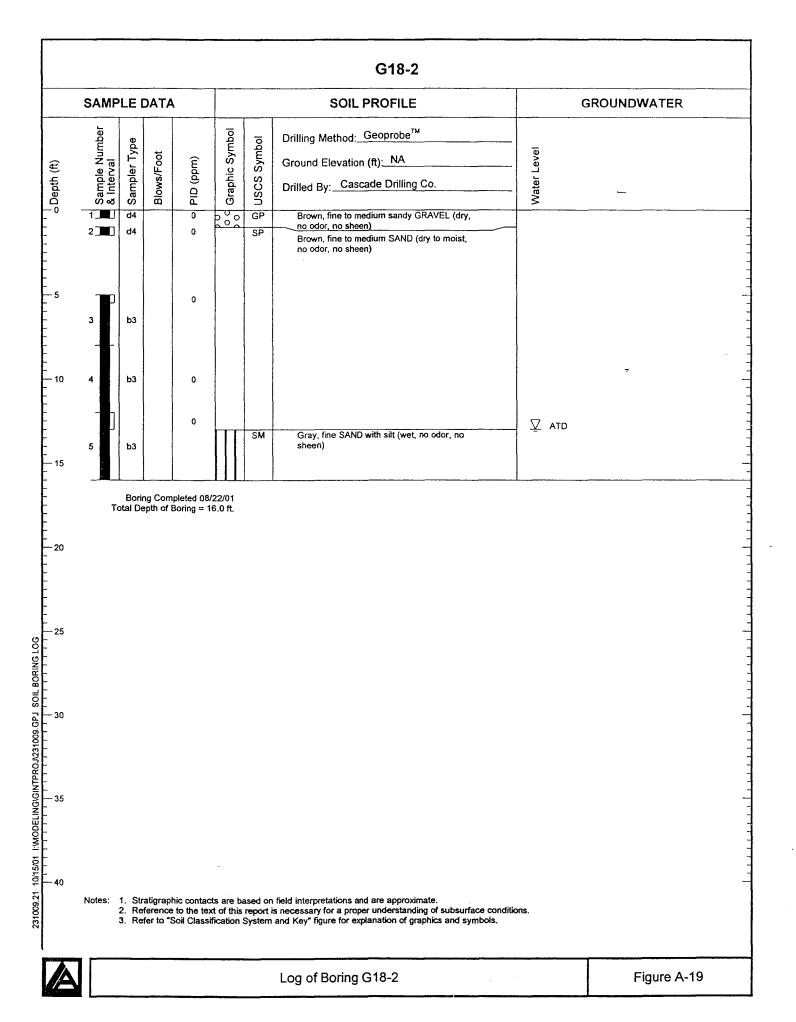


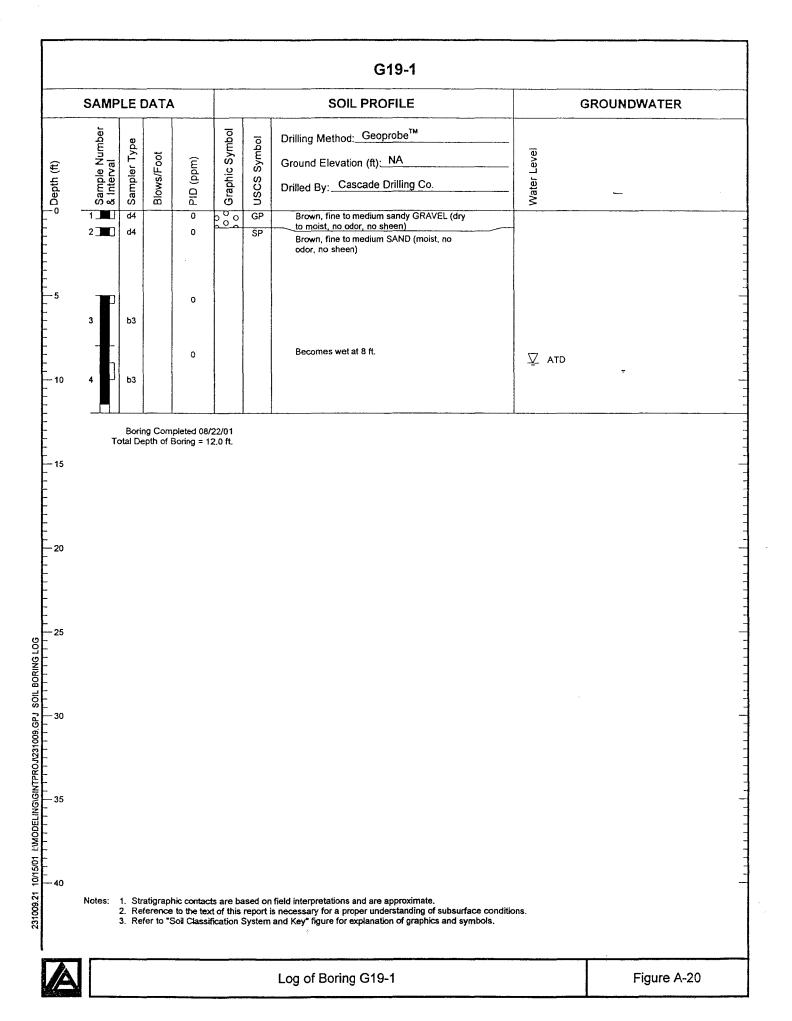


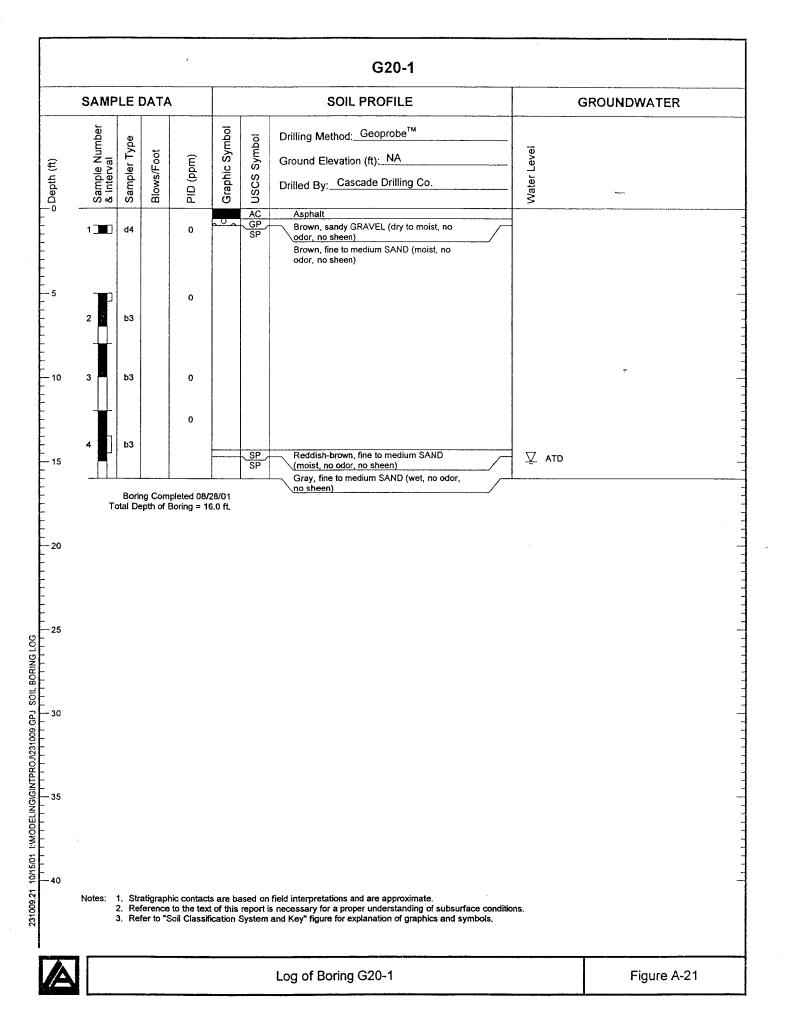


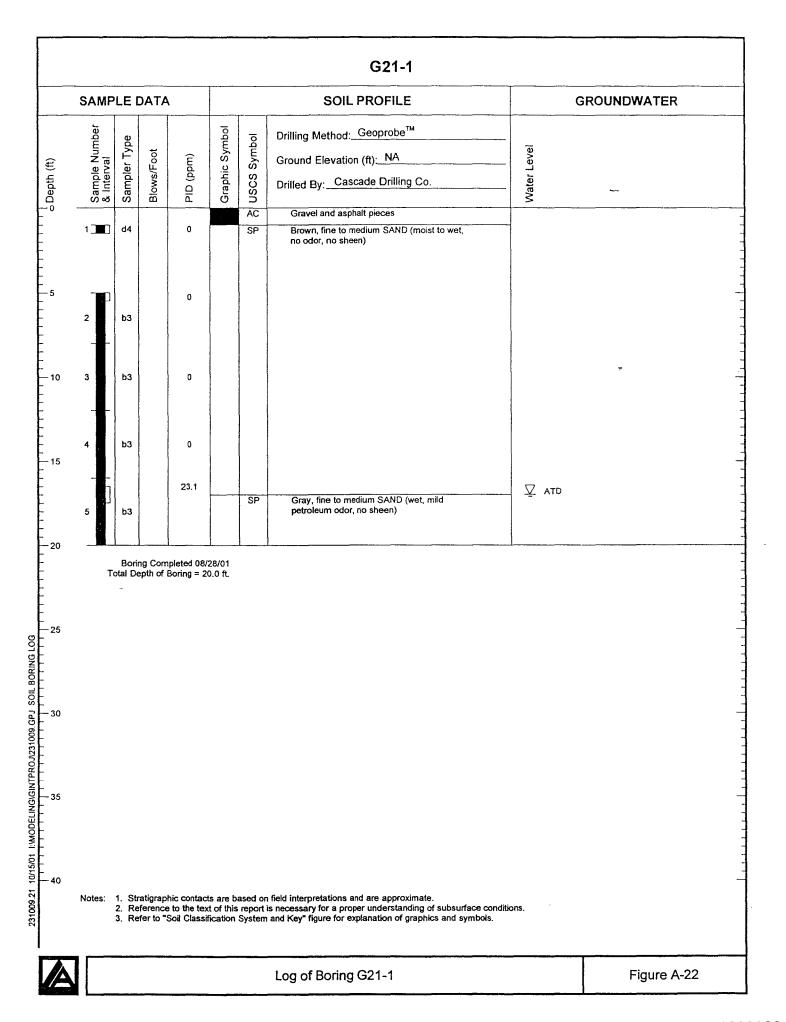


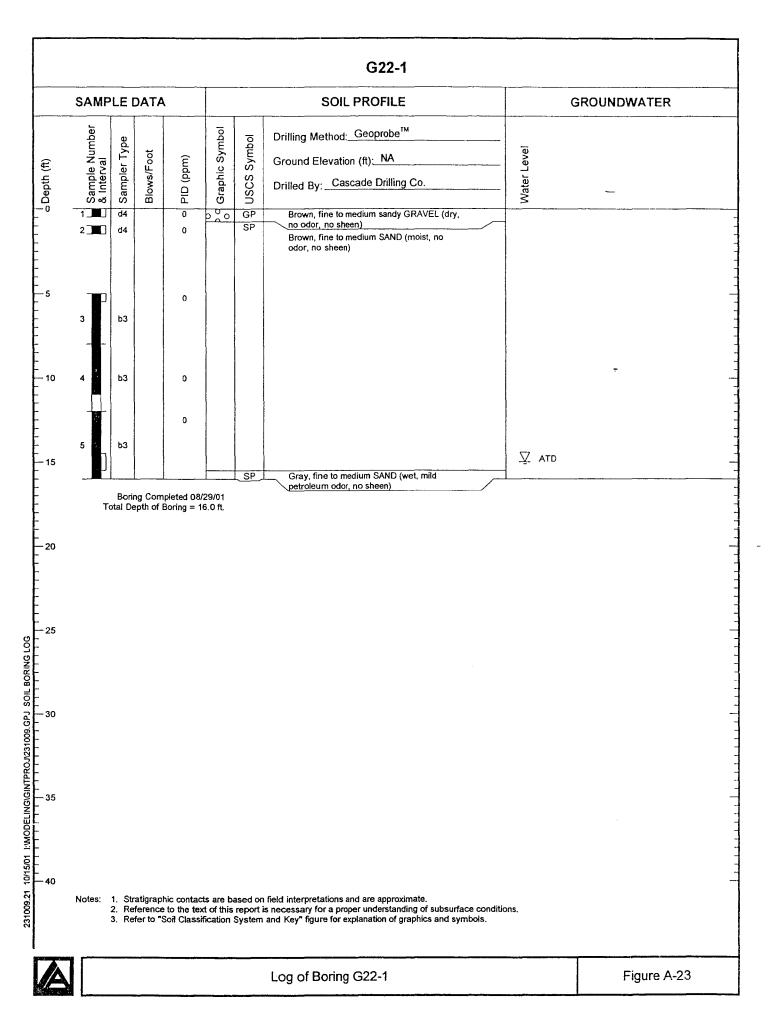


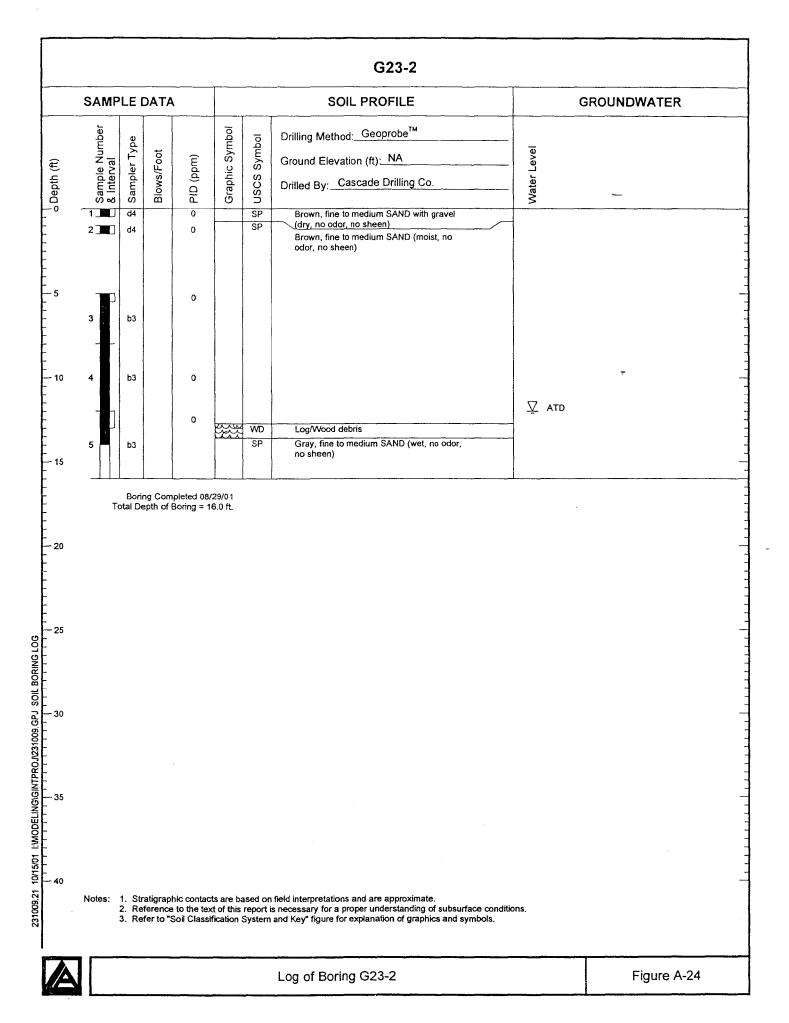


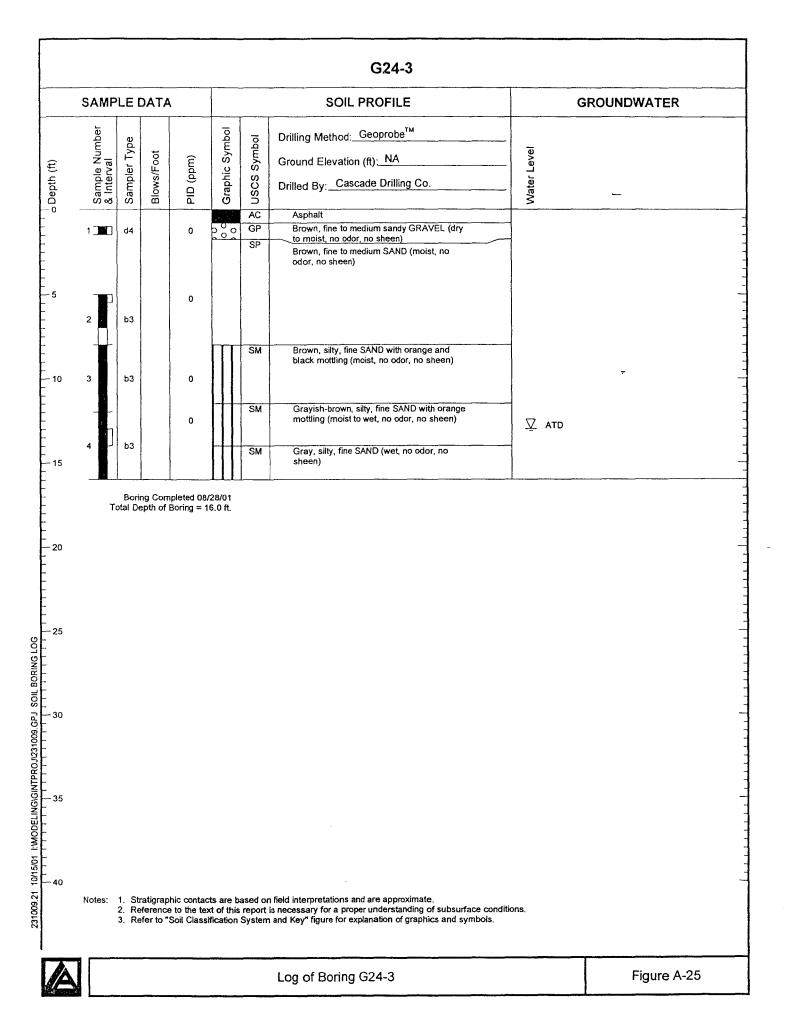


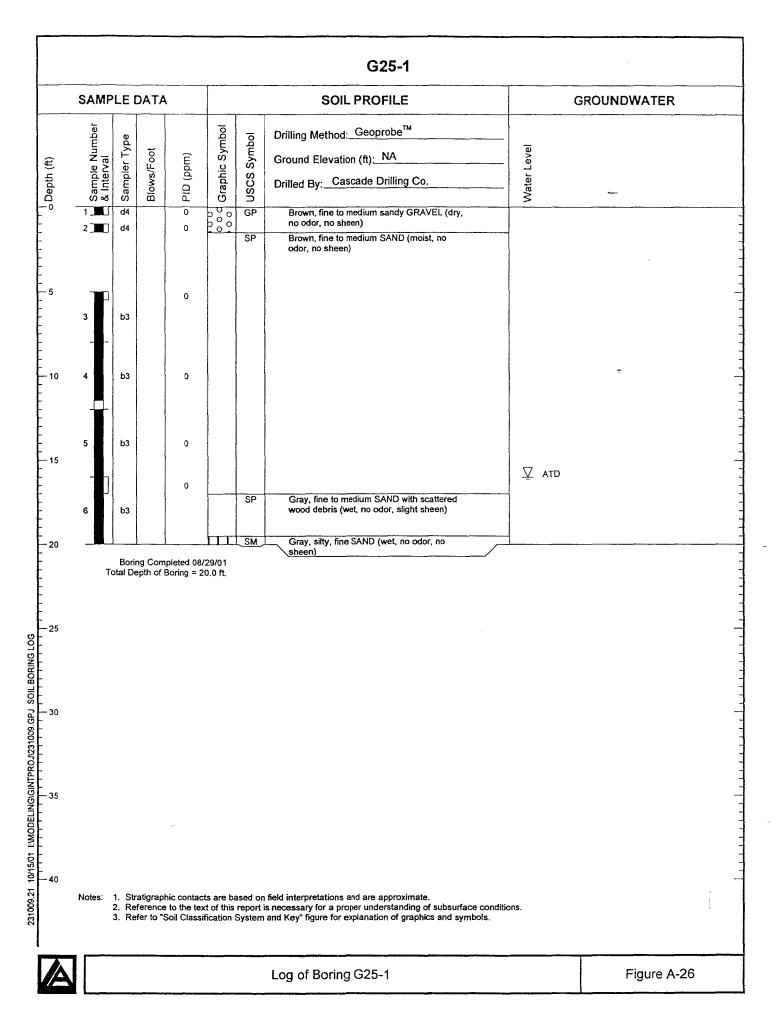


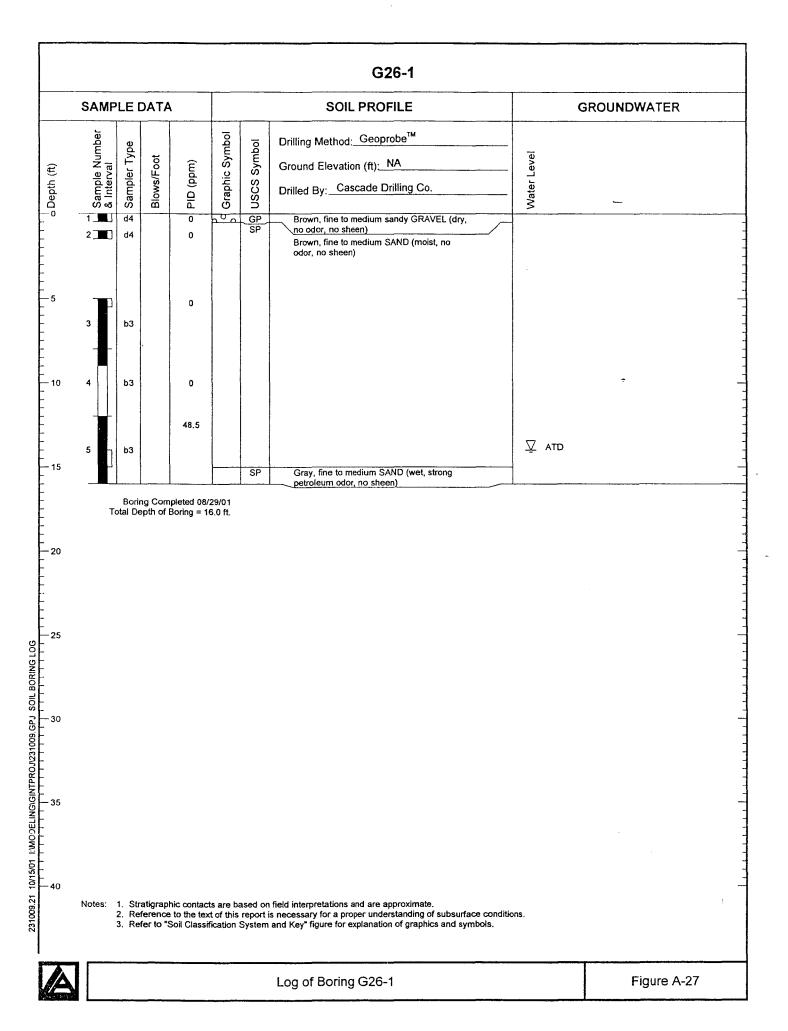


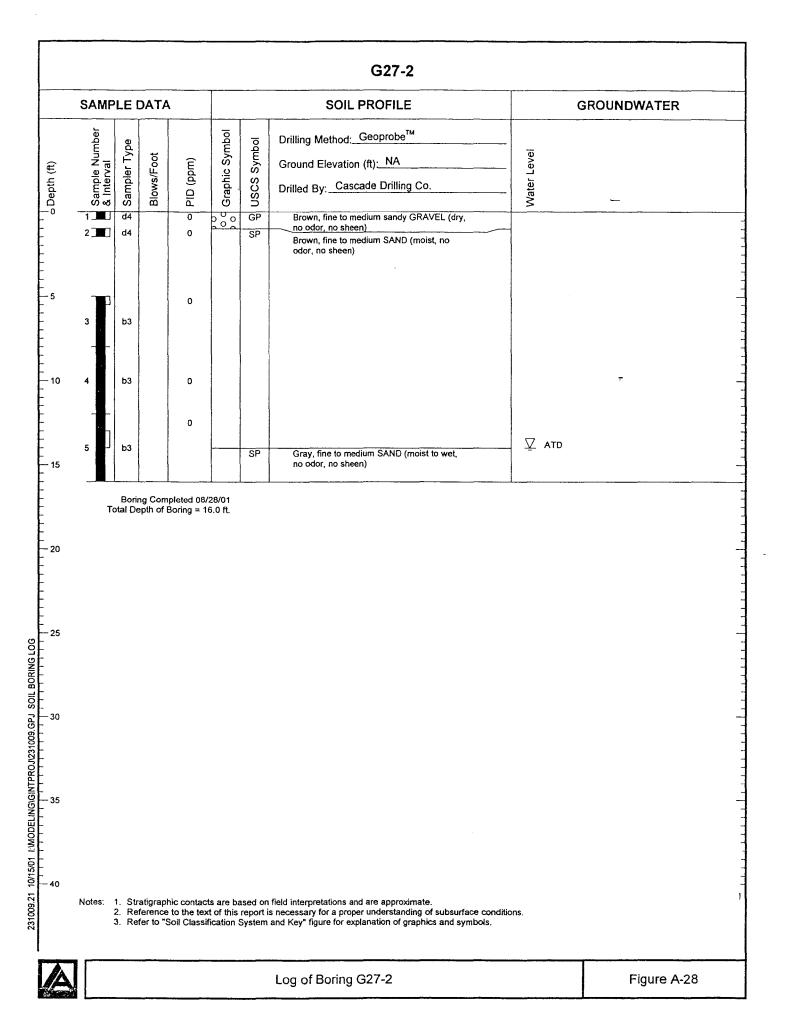


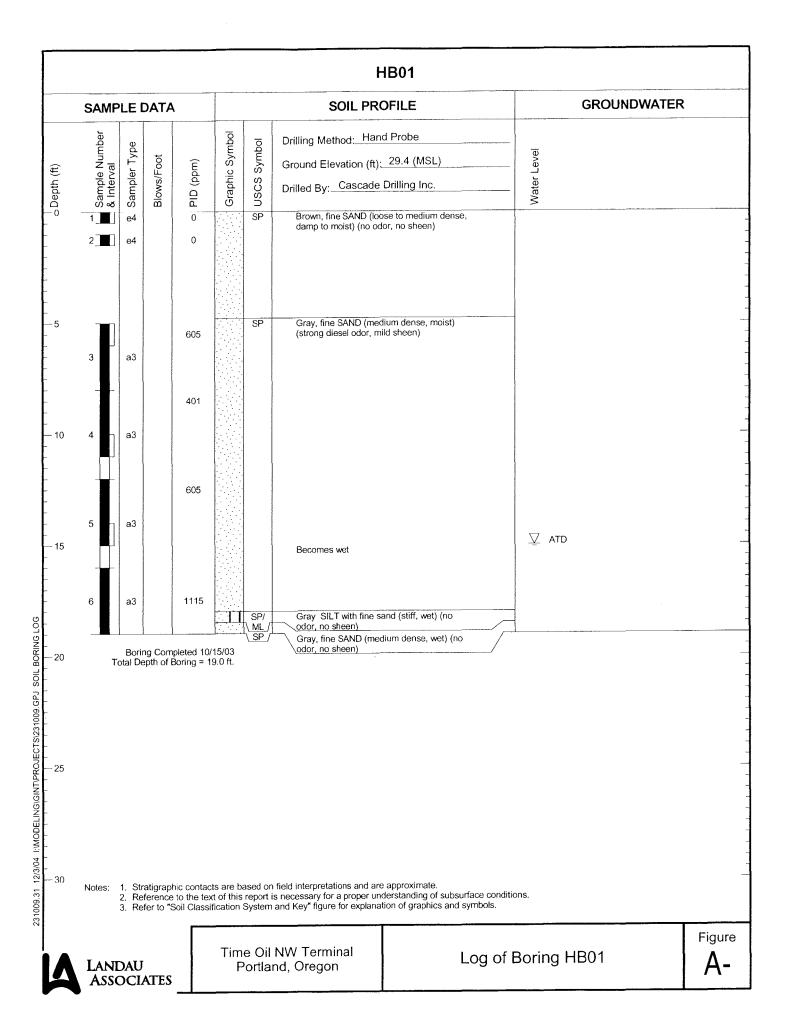


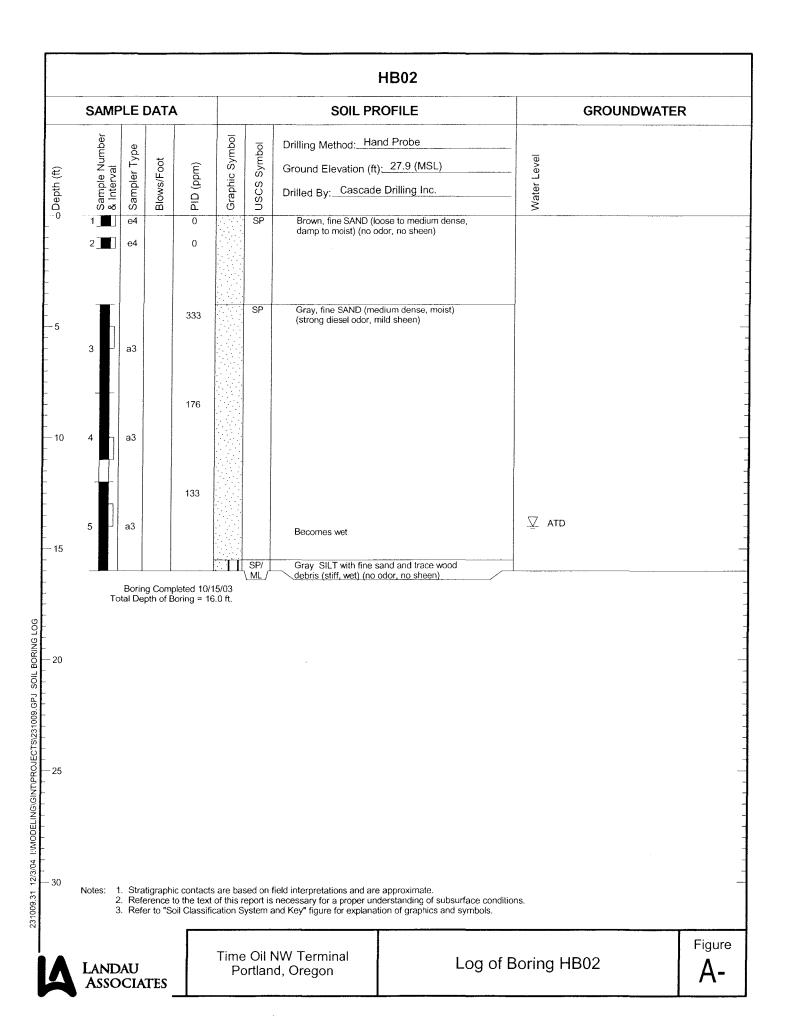


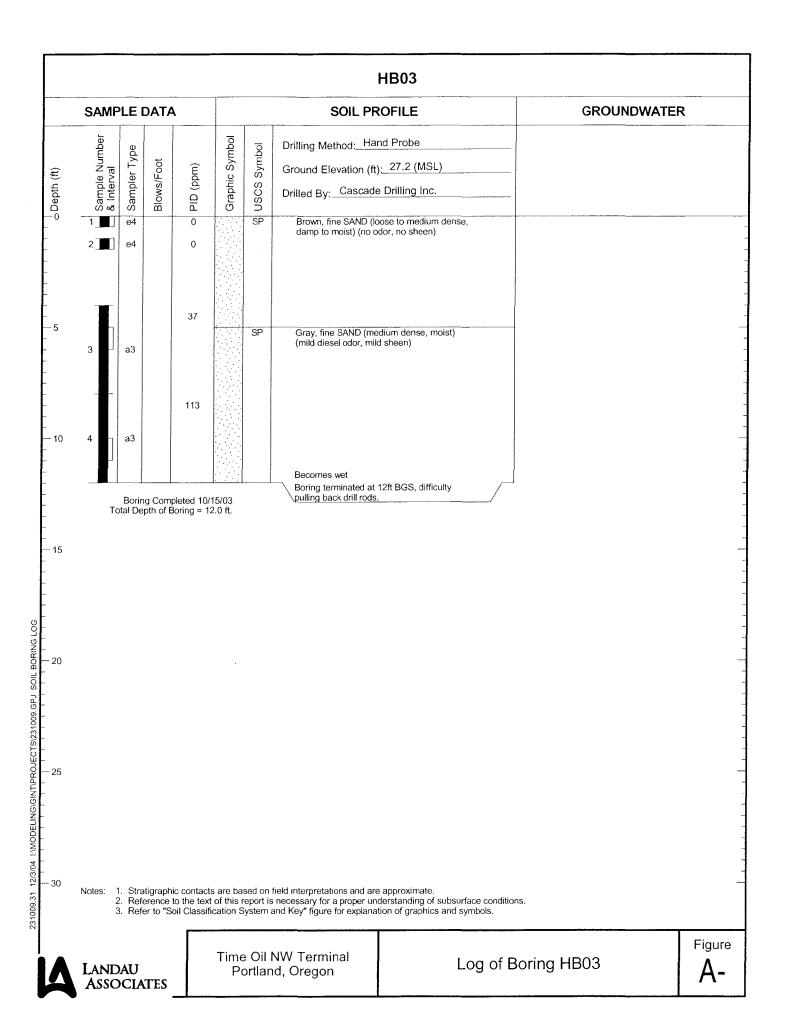


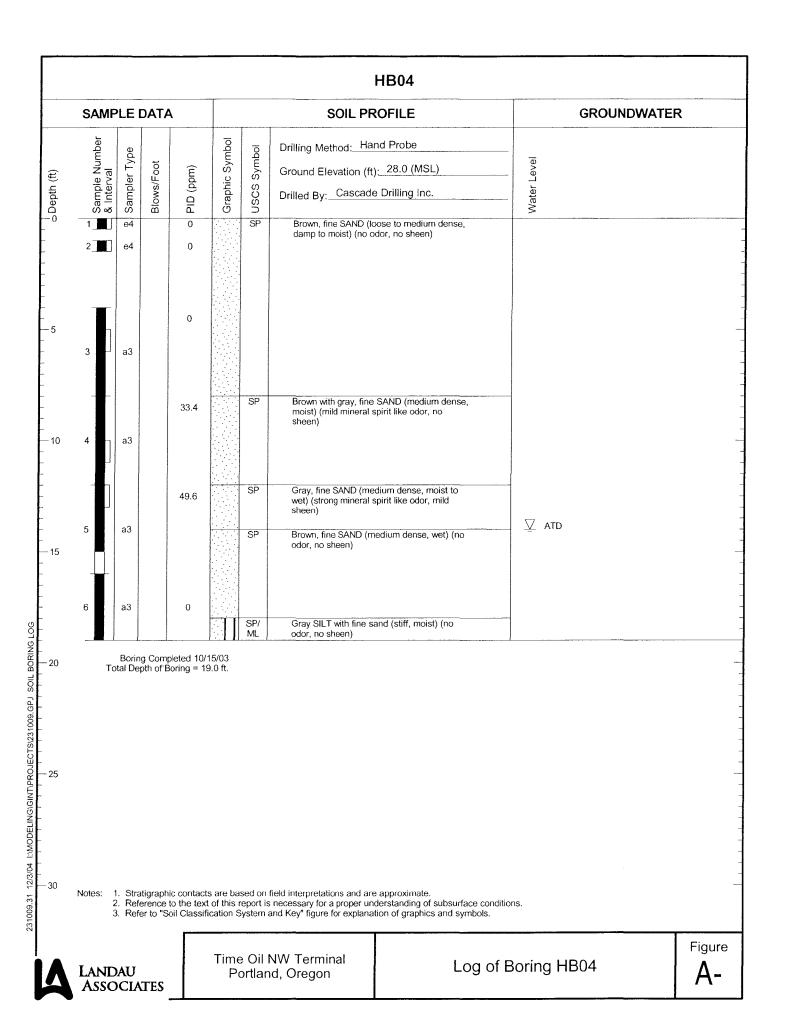


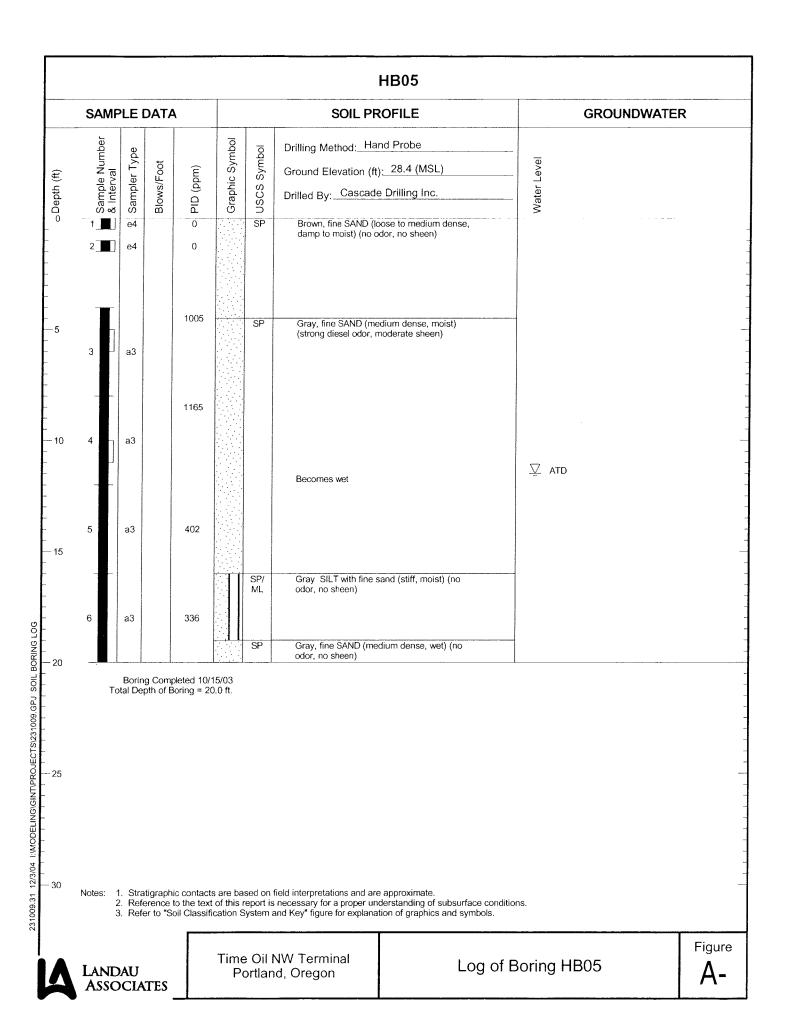


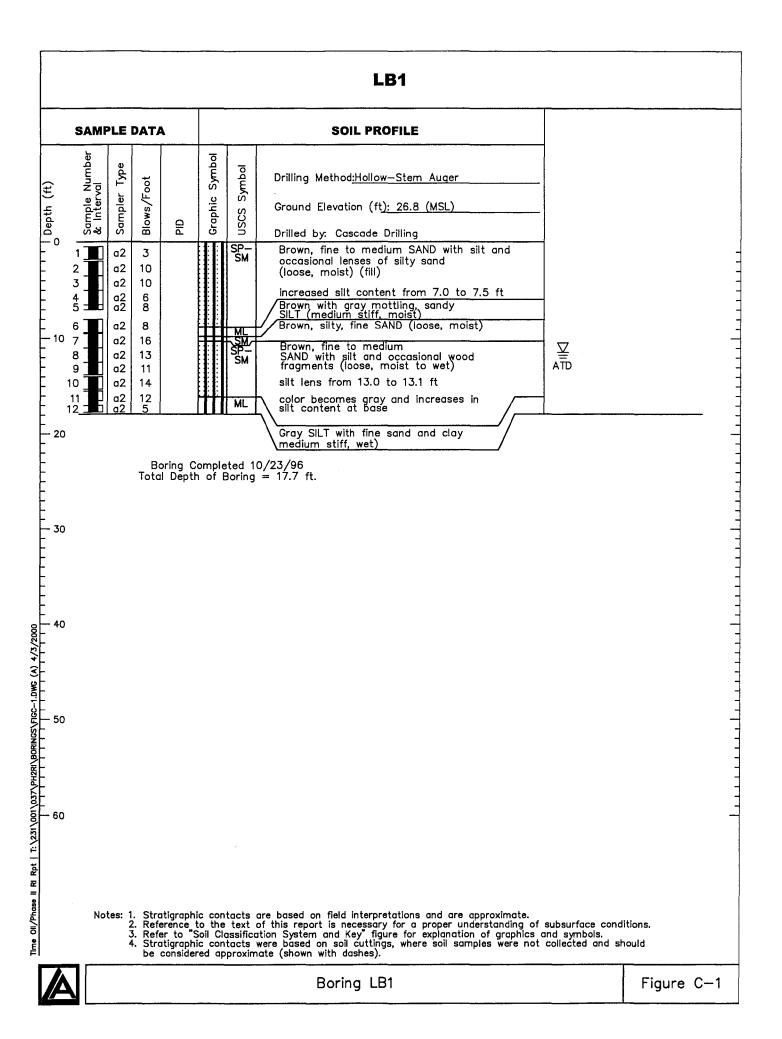


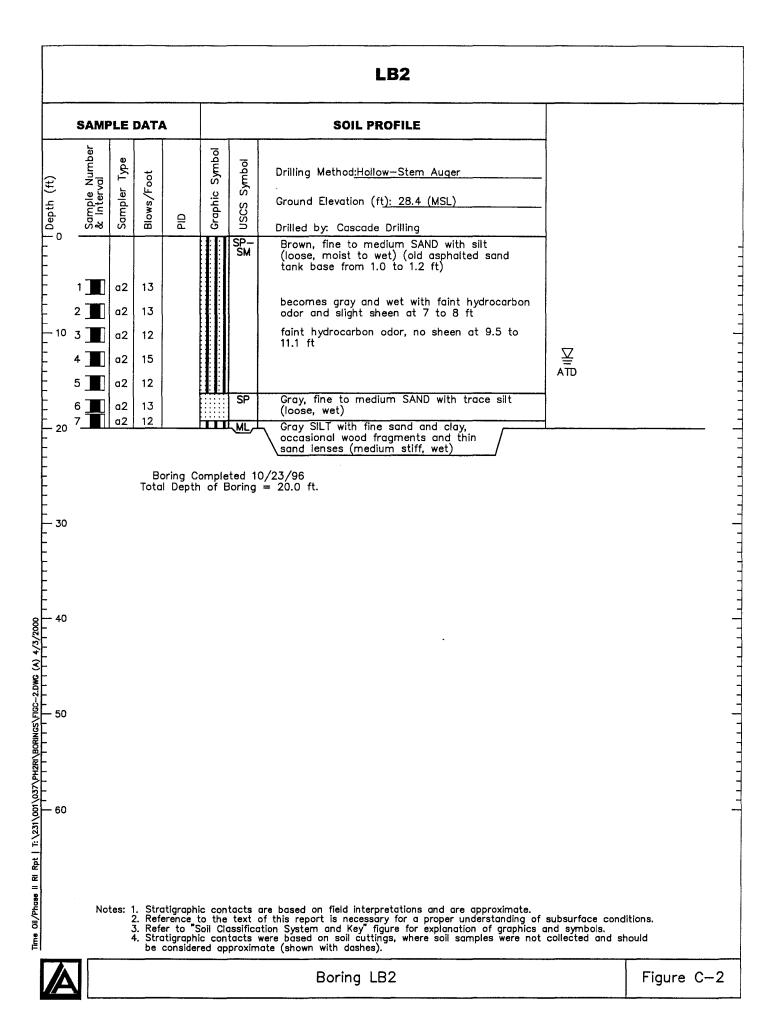






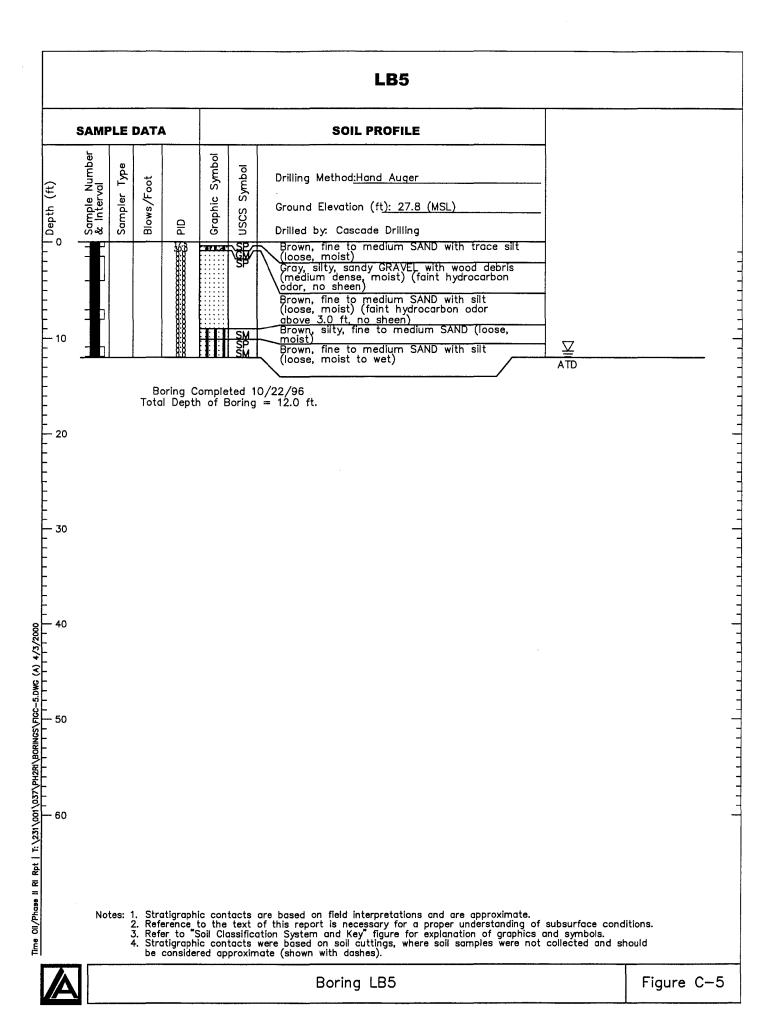




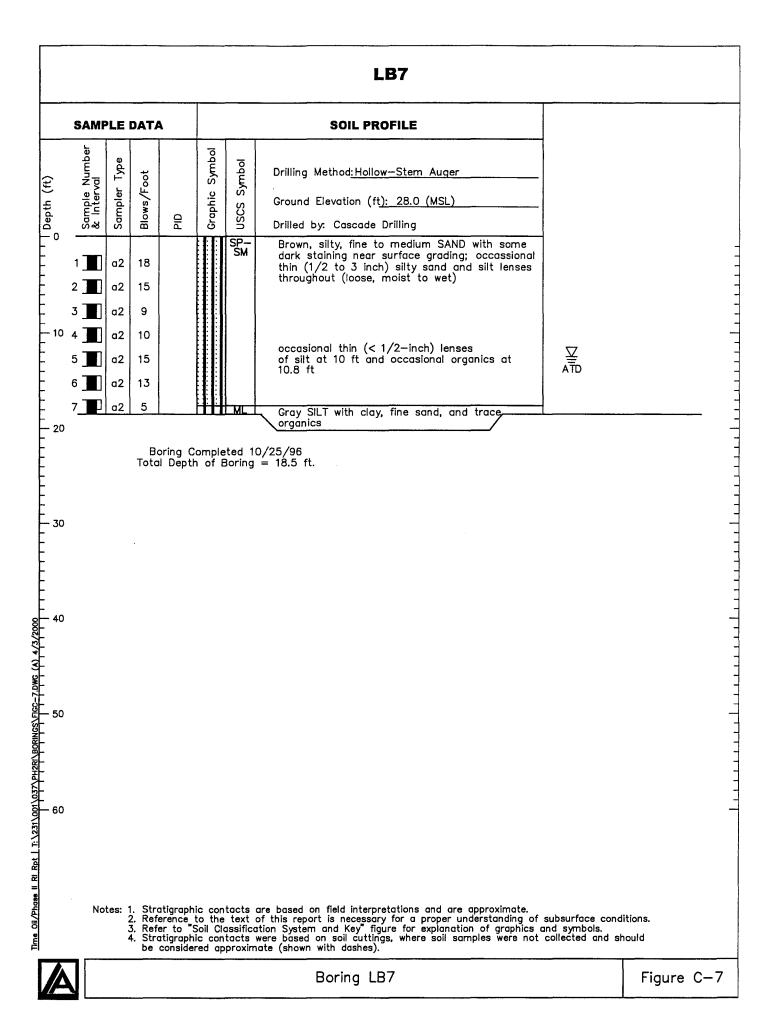


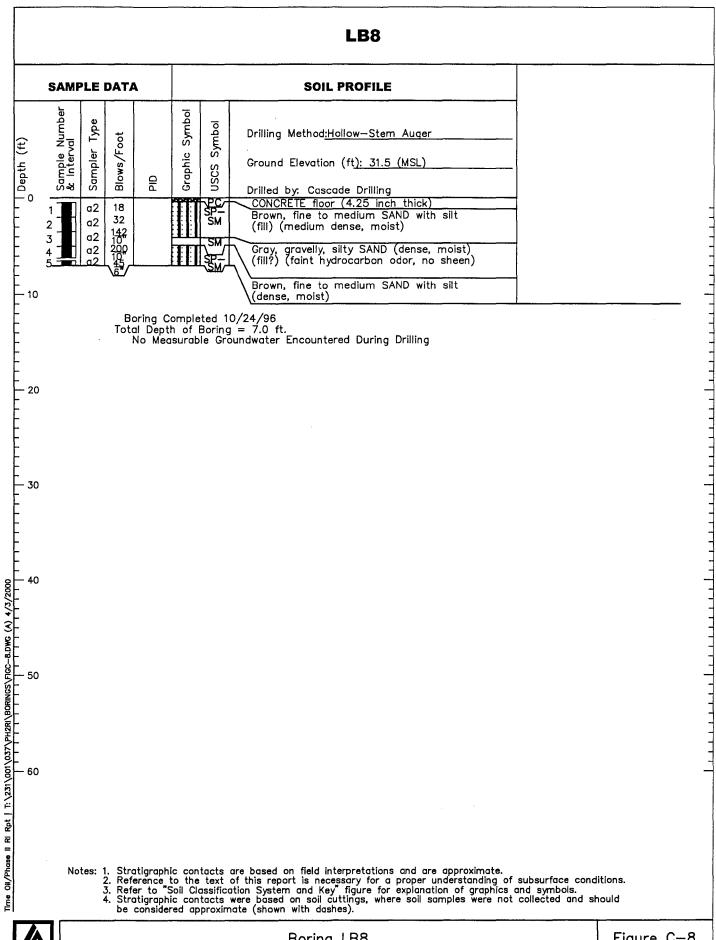
							LB3		
	SAMF	LE	DATA				SOIL PROFILE		
l Depth (ft) o	Sample Number & Interval	Sampler Type	Blows/Foot	PiD	Graphic Symbol	USCS Symbol	Drilling Method: Hollow—Stem Auger  Ground Elevation (ft): 28.2 (MSL)  Drilled by: Cascade Drilling		
- - - -	1 1 2	a2 a2	15 14			SP- SM	Brown, fine to medium SAND with silt (loose, moist to wet) (grades slightly coarser) moderate hydrocarbon odor, no sheen at 4.5 to 6 ft		
- - - - - - - - - -	3	a2 a2 a2 a2 a2	21 15 10 9			ML SM	occasional thin (1/8 to 1/4—in) interbeds of silt with moderate hydrocarbon odor, no sheen  Gray SILT with clay and fine sand interbedded with silty fine SAND, occasional wood fragments near top (medium stiff/loose, wet)	∑ ATD	
- - 20 -	/_ <b></b> _	<u>.QZ 1</u>		ring C Depth	omple	ted 10 Boring	/23/96 = 19.0 ft.	<u> </u>	
• • •									
- - 30 -									
- - -									
- - - - 40 -									
•									
- 50									
•									
60									
- 50 - 50 60	No	2	. Refe . Refe . Stra	rence t r to "S tigraphi	to the Soil Clo ic con	text o ssificat tacts w	re based on field interpretations and are approximate. f this report is necessary for a proper understanding of ion System and Key" figure for explanation of graphics ere based on soil cuttings, where soil samples were not ite (shown with dashes).	and symbols.	
	-					-			

SA	MPLE	DATA	<b>\</b>			SOIL PROFILE		
(II)	& Interval Sampler Type	Foot		c Symbol	Symbol	Drilling Method <u>:Hollow</u> —Stem Auger		
Sample Nu	& Inte	Blows/Foot	Plo	Graphic	nscs	Ground Elevation (ft <u>): 27.7 (MSL)</u> Drilled by: Cascade Drilling		
1 ] 2 ]	<b>a</b> 2	18			SP- SM	Brown, fine to medium SAND with silt and gravel in upper 10 ft and occasional 0.1 ft—thick silty sand lenses between 10—15.5 ft (loose, moist to wet)		
3 <u> </u>	<ul><li>d2</li><li>d2</li><li>d2</li><li>d2</li></ul>	16 9 17				color becomes gray at 9.5 to 11 ft	<u></u> ATD	
6 ]	<b>a</b> 2	13				Gray SILT with clay, fine sand, and occasional wood fragments (soft, wet)	AID	
- 30		7010	I Depth	1 07 6	Boring	0/25/96 = 18.5 ft.		
- 30 - 40		iota	l Depth	TOTE	3oring	= 18.5 ft.		
		1010	l Depth	a or E	Boring	= 18.5 ft.		

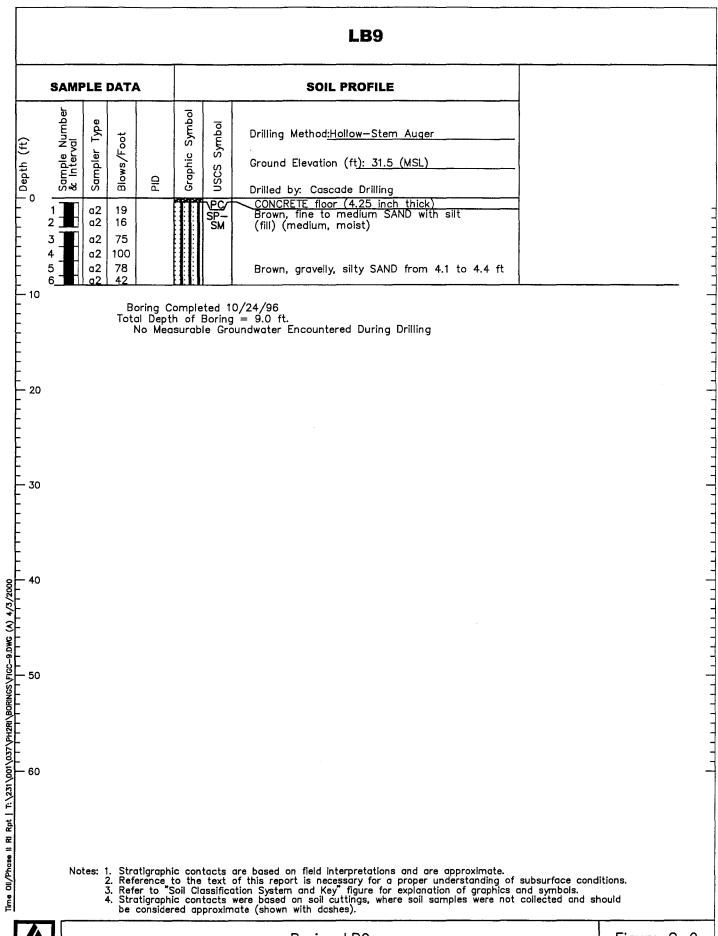


	Inmber			\	Symbol	Symbol	SOIL PROFILE  Drilling Method: Hollow—Stem Auger		
	Sample Number & Interval	Sampler Type	Blows/Foot	DID	Graphic S	USCS Syr	Ground Elevation (ft <u>): 29.0 (MSL)</u> Drilled by: Cascade Drilling		
1 2		a2 a2 a2	17 15 21			SP SM ML	Brown, fine to medium SAND with silt (loose, moist to wet) asphalt layer from 2.5 to 2.7 ft  1.8 to 12.2 ft occasional thin (1/4 to 1/2—inch) silt lenses wood fragments at 17.7 to 17.8 ft		
5		a2 a2 a2 a2	16 19 17				Gray SILT with clay and fine sand occasional sand layers 0.1 ft thick (medium stiff, wet)	∑ ATD	
20		1		oring Co Total	omple Depth	ted 10	0/23/96 8.5 ft.	, <sub>2</sub> , <sub>2</sub> , , , , , , , , , , , , , , , , , , ,	
30									
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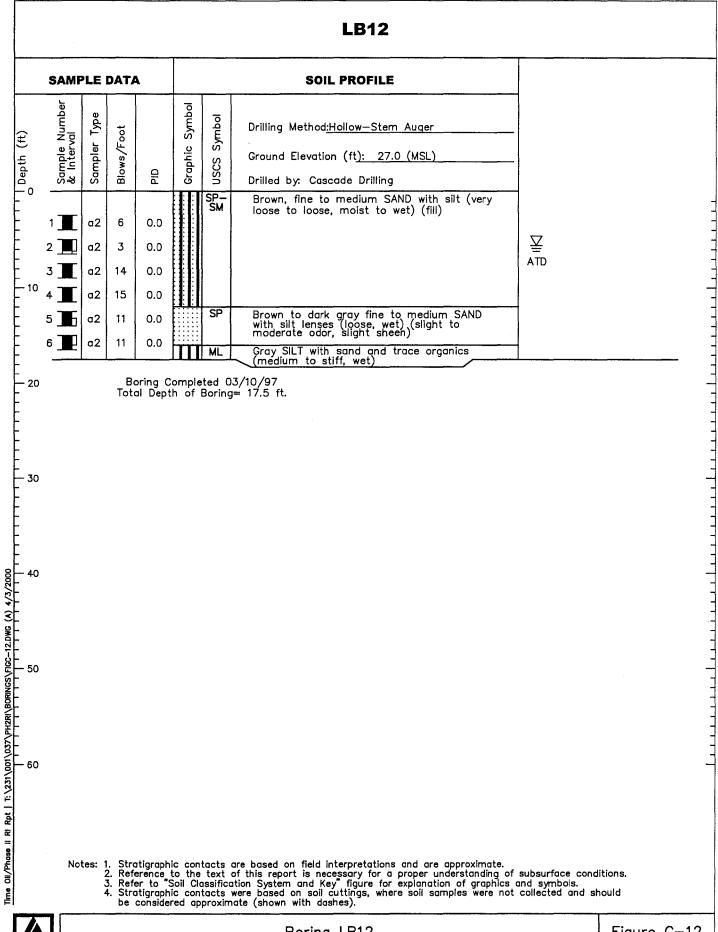


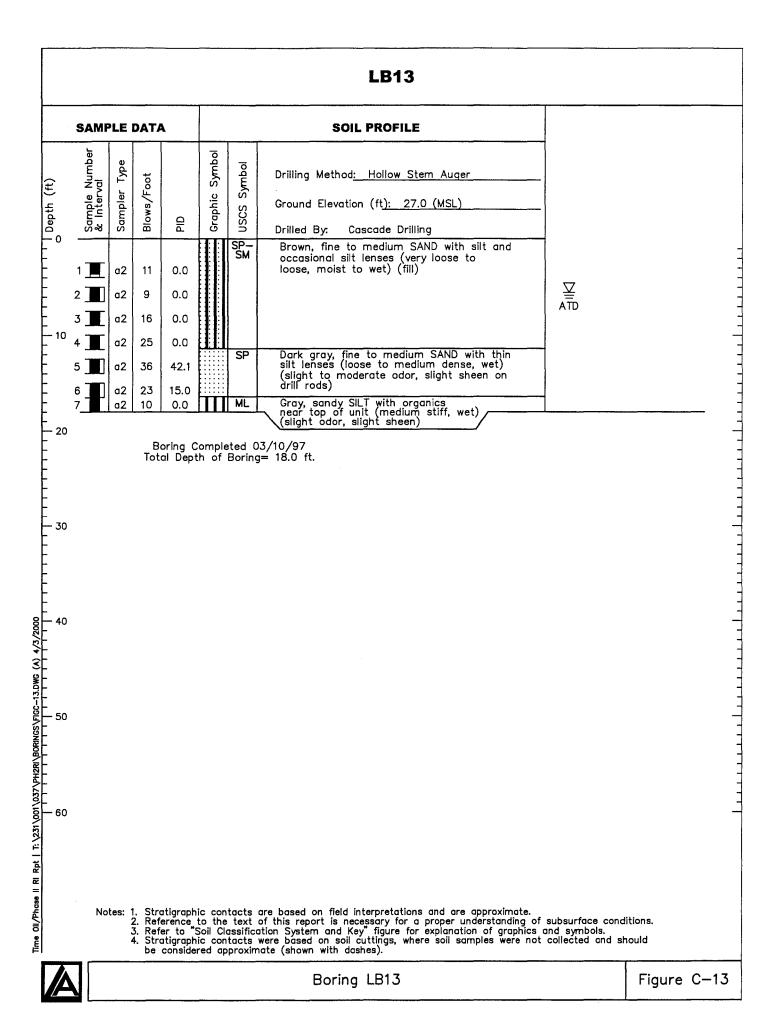


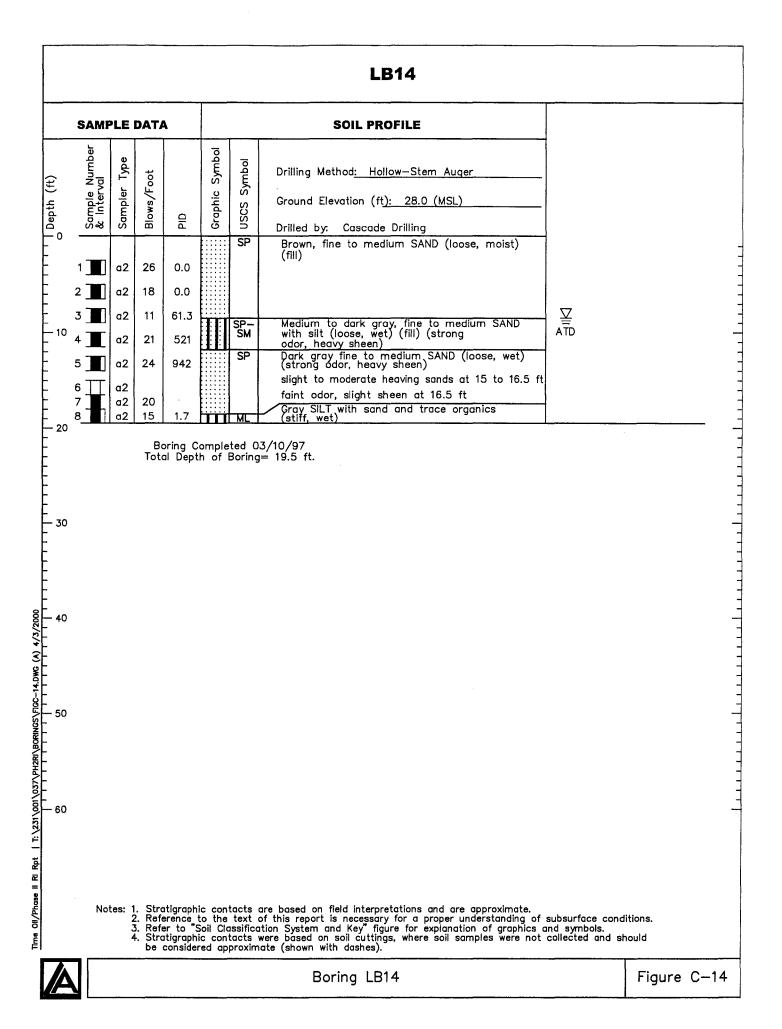
							LB10		
	SAMP	LE I	DATA	١			SOIL PROFILE		
l Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID	Graphic Symbol	USCS Symbol	Drilling Method: <u>Hollow—Stem Auger</u> Ground Elevation (ft <u>): 31.5 (MSL)</u> Drilled by: Cascade Drilling		
1		a2 a2 a2 a2 a2	21 5 8 8 10			PC) SP- SM	CONCRETE floor (4 inch thick) Brown, fine to medium SAND with silt (loose, moist) (fill)		
- 10			Tota	al Dept	h of I	Boring	0/24/96 = 8.0 ft. undwater Encountered During Drilling		
- 20									
- 30									
- 40									
- 50									
- 60									
50									
- 50 - 60	No	tes: 1 2 3 4	Stro Refe Refe Stro	atigraphi erence f er to "S atigraphi consider	ic con to the Soil Cla ic con red ap	tacts a text o issificat tacts w proximo	are based on field interpretations and are approximate.  If this report is necessary for a proper understanding of subsurface concition System and Key" figure for explanation of graphics and symbols.  If you were based on soil cuttings, where soil samples were not collected and slate (shown with dashes).	litions. nould	
A							Boring LB10	Figure	C-10

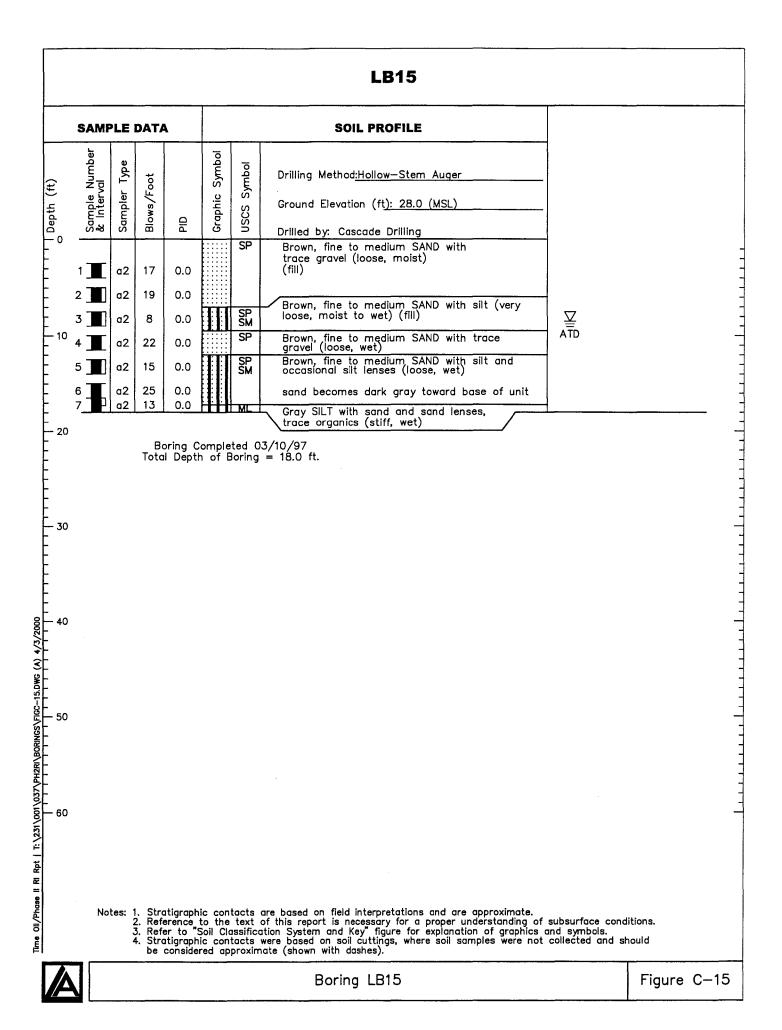


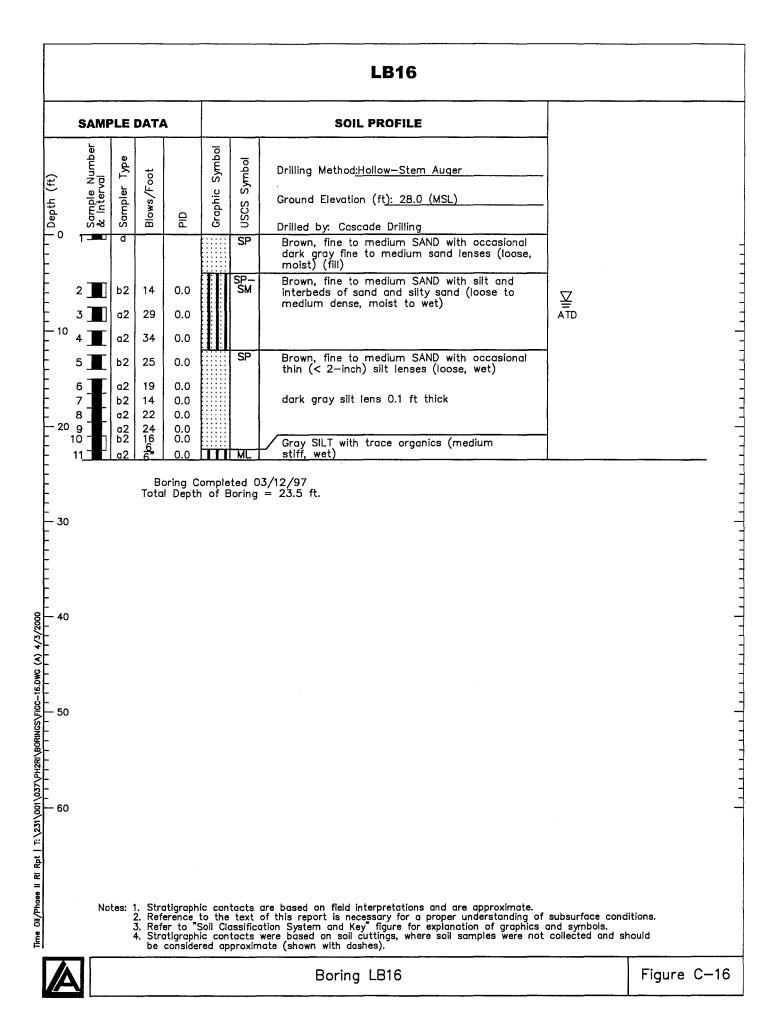
	E DAT	ΓΑ			SOIL PROFILE		
Sample Number & Interval	Sampler Type Blows/Foot	PID	Graphic Symbol	USCS Symbol	Drilling Method:Hollow Stem Auger  Ground Elevation (ft): 27.0 (MSL)  Drilled by: Cascade Drilling	-	
	a2 3 a2 2 a2 14 a2 13 a2 22	4.1 0.0 0.0		SP- SM	Brown, fine to medium SAND with silt (very loose to loose, moist to wet) (fill)  Dark gray, fine to medium SAND with silt and zones of sand with silt (loose, wet) (faint	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	
	a2 26 a2 26 a2 11	18.0		ME	to moderate hydrocarbon odor, no sheen)  Dark gray SILT with sand and trace organics (medium stiff, wet) (slight odor at 17.6 ft, no sheen)		

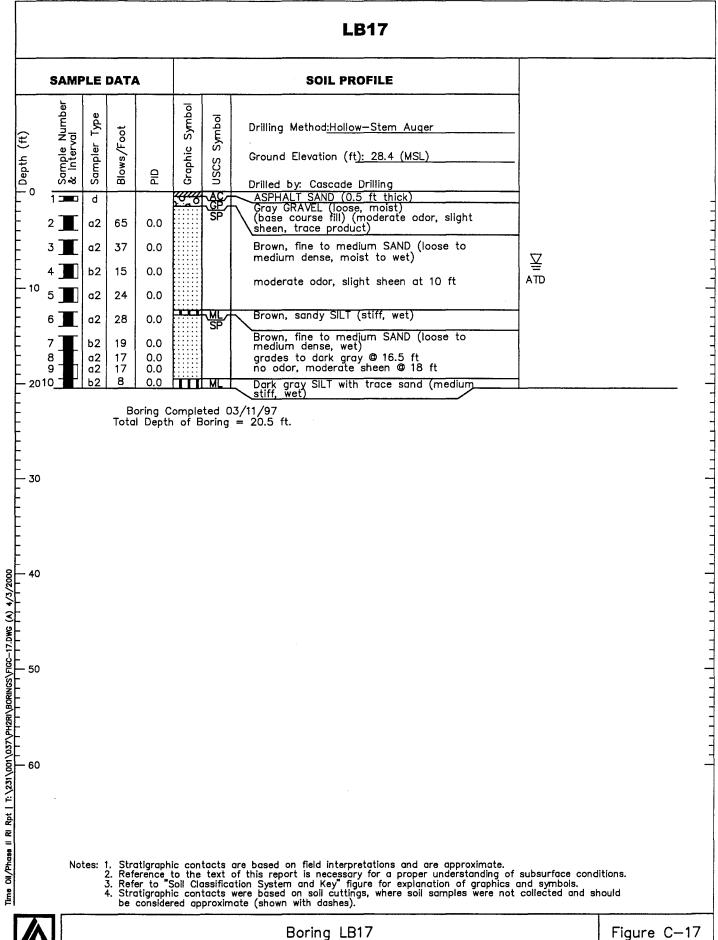












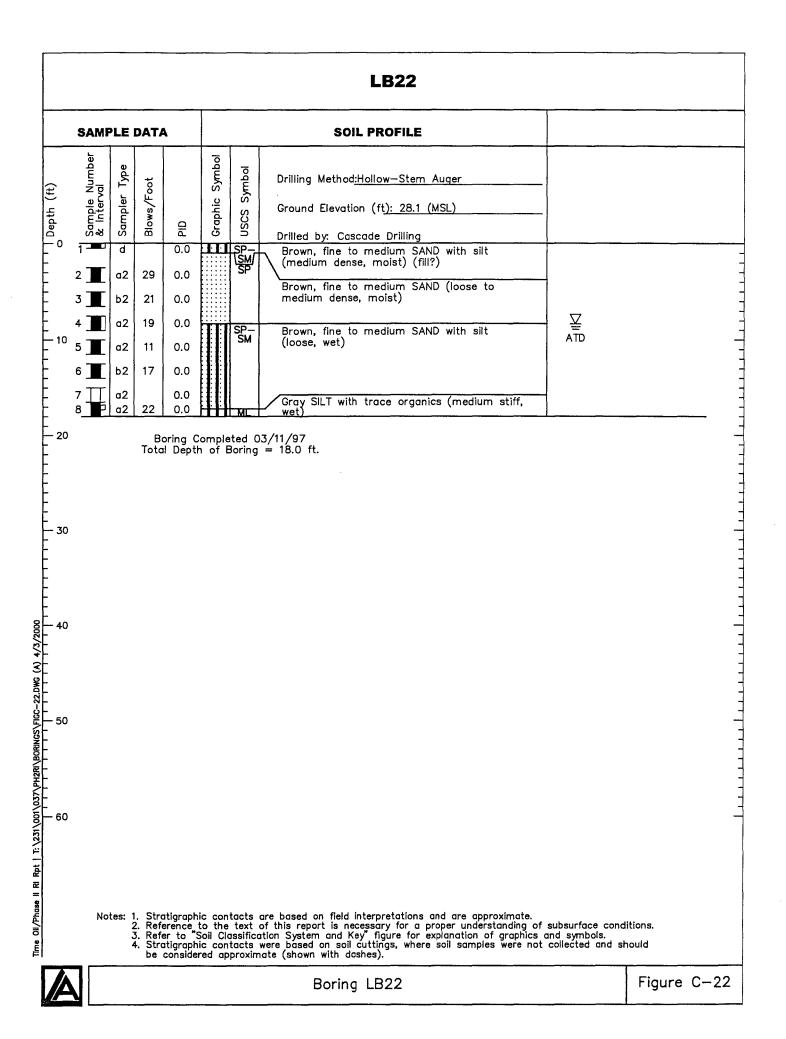


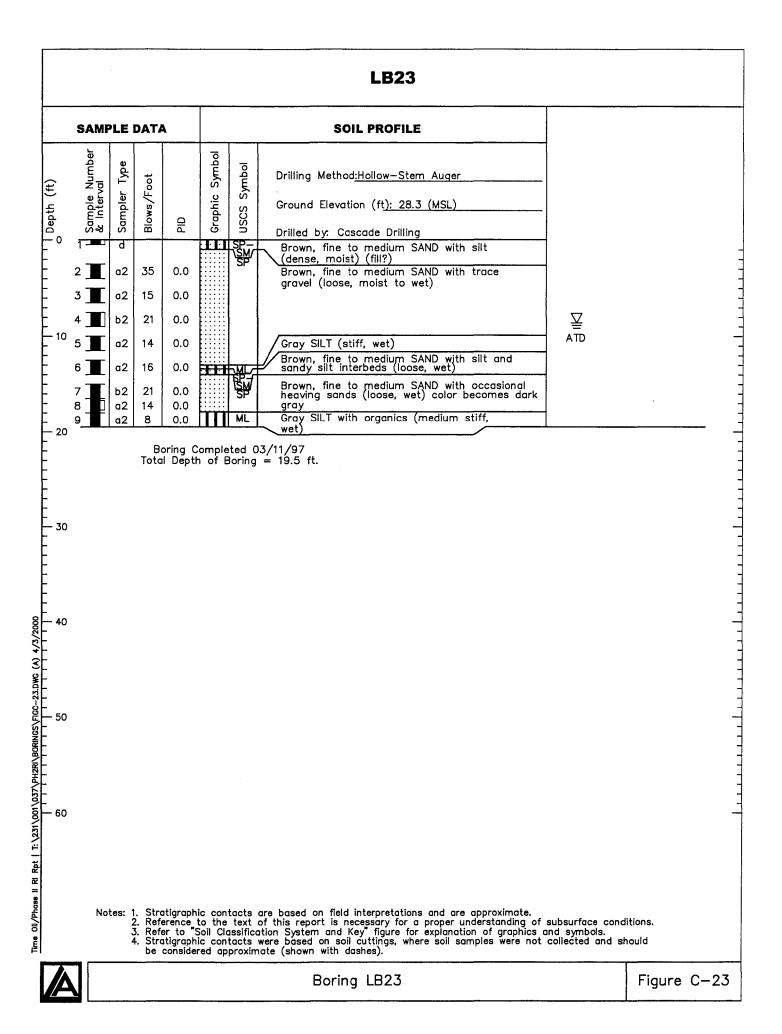
S				1		LB18		
						SOIL PROFILE		
-0 1 2 3 4	Sample Number & Interval	J/swoll 66 19 15	0.0 0.0 0.0 0.0	Graphic Symbol	USCS Symbol	Drilling Method:Hollow—Stem Auger  Ground Elevation (ft): 28.1 (MSL)  Drilling by: Cascade Drilling  Brown, fine to medium SAND with occasional silt lenses (loose to medium dense, moist to wet)  gray silt lens 0.2 ft thick @ 13.5 ft	⊒ ATD	
6 7 8 9 - <sup>20</sup> 10	- 1 a 2	2 14 2 19 2 14	0.0 0.0 0.0 0.0 0.0		ML	color grades to dark gray © 15 ft gray silt lens 0.2 ft thick © 19 ft  Gray SILT with sand lenses (stiff, wet)		
- 30		Toto	il Dépth	n oḟ E	Boring	03/11/97 = 21.0 ft.		
- <b>4</b> 0 - <b>5</b> 0								

					<b>-</b>		LB19			
	SAMF	LE	DAT	A			SOIL PROFILE			
<del>-</del> 10	Sample Number 5 2 3 4 5 6 7 8 9	a2 a2 b2 a2 a2	38 23 11 13 10 16 19	0.0 0.0 0.0 0.0 0.0 0.0 0.0	Graphic Symbol	USCS Symbol	Drilling Method:Hollow—Stern Auger  Ground Elevation (ft): 27.9 (MSL)  Drilled by: Cascade Drilling  Brown, fine to medium SAND with occasional silt lenses, gravel, and organics (very loose to medium dense, moist to wet)  silt lens 0.2 ft thick © 13 ft  color becomes dark gray © 15 ft	<b>∑</b> ATD		
- 201	o	b2	11 Bo	0.0	omple	ted 0	Gray SILT with trace organics (medium stiff, wet)  3/11/97 = 21.0 ft.			
- 30										
· 40										
50										
60	Not	3	2. Ref 5. Ref	erence t er to "S	to the Soil Clo	text o ssifico	are based on field interpretations and are approximate. of this report is necessary for a proper understanding of sub ation System and Key" figure for explanation of graphics and	symbols.		
人	7		i. Stro	atigraphi	ic con	tacts	were based on soil cuttings, where soil samples were not col late (shown with dashes).  Boring LB19	nected and sh	Figure	C-19

	SAMP	LE [	DAT	4			SOIL PROFILE			
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sample Number 5 6 6	ac bc sampler Type	26 13 29 19	0.0 0.0 0.0 0.0 0.0	Graphic Symbol	USCS Symbol	Drilling Method:Hollow—Stem Auger  Ground Elevation (ft): 28.0 (MSL)  Drilled by: Cascade Drilling  Brown—gray, fine to medium SAND with gravel (medium dense, moist) (fill)  Brown, fine to medium SAND with occasional silt lenses (loose to medium dense, moist to wet)  color becomes dark gray © 15.5 ft	∑ ATD	6.	
	7 - 3	a2 a2	23 12	0.0		ML	Gray SILT with trace organics (stiff, wet)			
- 30 - 30 30 40										
- 40										
- 40										

	CAME						COURDOCK E		
	SAMF uper		DATA	•	Symbol	0	SOIL PROFILE		
	e Nur	er Ty	/Foot			Symbol	Drilling Method <u>:Hollow—Stem Auger</u>		
0	Sample Number & Interval	Sampler Type	Blows/Foot	O.	Graphic	USCS	Ground Elevation (ft <u>): 28.1 (MSL)</u>		
0	1-	a	В	<u> </u>	_	1 1	Drilled by: Cascade Drilling  Brown, fine to medium SAND with silt (medium dense, moist) (fill)		
	2	a2	50	0.0		SP	Brown, fine to medium SAND with occasional		
	3	a2	28	0.0			silt lenses (loose to dense, moist to wet)	lacksquare	
10	4 <u> </u>	b2 a2	21 25	0.0				<u>¥</u> ATD	
	6	a2	29	0.0			color becomes dark gray @ 15.5 ft		
	7	b2 a2	12 9	0.0 0.0		ML	Gray SIL1 with trace organics (medium stiff, wet)		
20	° <b>=</b> _	uz		·	ш	<u>ر                                     </u>	,	<u> </u>	·
			Tota	l Depth	of E	Boring	03/11/97 = 18.0 ft.		
30									
40									
50									
50									
50									
50									
50									





					ı		LB24			
	SAME	PLE	DAT	<b>A</b>			SOIL PROFILE			
Depth (ft) o	Sample Number & Interval	Sampler Type	Blows/Foot	PID	Graphic Symbol	USCS Symbol	Drilling Method:Hollow—Stern Auger  Ground Elevation (ft): 29.7 (MSL)  Drilled by: Cascade Drilling			
	1 1 2 1 3 1 4 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1	d a2 a2 a2	9 18	0.0 0.0 0.0 0.0		SP	Brown, fine to medium SAND (loose, moist to wet) (slight odor, no sheen)  color becomes gray © 7.5 ft	∑ ATD		
- - -	5	<b>a</b> 2	20	0.0					··· <u>·</u> ···	
- - -			B. Toto	oring C al Depth	omple n of E	ted 0 Boring	3/21/97 = 14.0 ft.			
— 20 - -										
- -										
- - -										
— 30 -										
- - -										
-										
- 40 -										
-										
- -										
- <del></del> 50 -										
- - -										
<u>-</u>										
- 60										
50	No		2. Ref 3. Ref 4. Stre	erence er to "S atigraph	to the Soil Clo ic con	text essifica tacts	are based on field interpretations and are approximate.  of this report is necessary for a proper understanding of a street of the street of t	subsurface condi nd symbols. collected and sh	itions. ould	
人	7				- <b>r</b>		Boring LB24		Figure	C-24

SAM	PLE	DATA			SOIL PROFILE	GROUNDWATER
per	Φ		loq	<del>о</del>	Drilling Method: Hollow-stem Auger	
Sample Number & Interval	Sampler Type	oot	Graphic Symbol	Symbol	Ground Elevation (ft): 29.7 (MSL)	e ve
Sample N & Interval	nple	Blows/Foot	phic	nscs s	Drilled By: Cascade Drilling	Water Level
Sar 2	Sar	Blo	1 - 1	1		Maria Maria
				SP	Yellow-brown, fine SAND with medium sand (medium dense, moist)	
, 🔳	<u> </u>	45				
1	b2	15				
2	b2	14				
3	b2	18				
0 4	b2	15		SP	Dark gray, fine to medium SAND with trace silt	
5 -	b2	27			(medium dense, wet)	
6	b2	22		SP	Dark gray, fine to medium SAND (medium dense, wet) (moderate petroleum odor, slight sheen)	
5 7	b2	34				
8	b2	38		SP	Yellow-brown, fine SAND with medium sand (dense, wet)	
9	b2	12		SP- SM	Gray, fine SAND with silt (medium dense, wet)	
10	b2	18		ИL	Gray, sandy SILT (very stiff, moist)	
11	b2	18				
 12	b2	16				
- 13	b2	16	na-central de la central de la			
.5 14	b2	16				
	b2	11		SM/	Gray, silty fine SAND to sandy SILT (medium	-
-				ML	dense to very stiff, wet)	
16	b2	17				
17	b2	19		SP	Dark gray, fine to medium SAND (medium dense, wet)	
18 	b2	17				
19 	b2	11				
20	b2	14		3.4	Dark area, silly modium CAND (modium	_
21	b2	26		SM	Dark gray, silty medium SAND (medium dense, wet)	
22	b2	25				
23	b2	31		SP	Dark gray, fine to medium SAND (medium dense to very dense, wet)	
			la Gal			

A

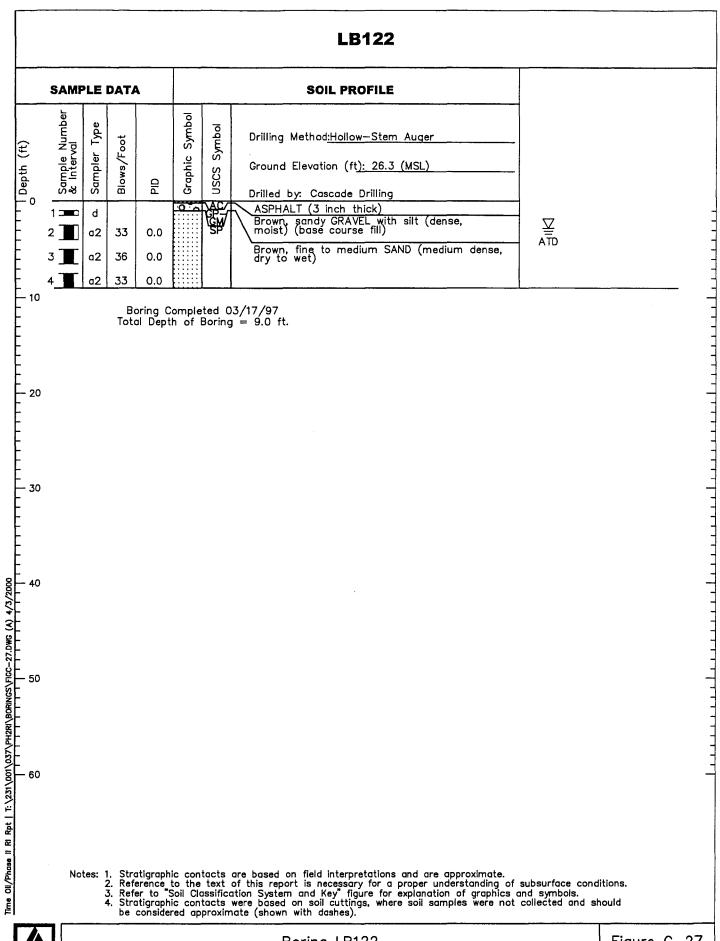
Log of Boring LB-25

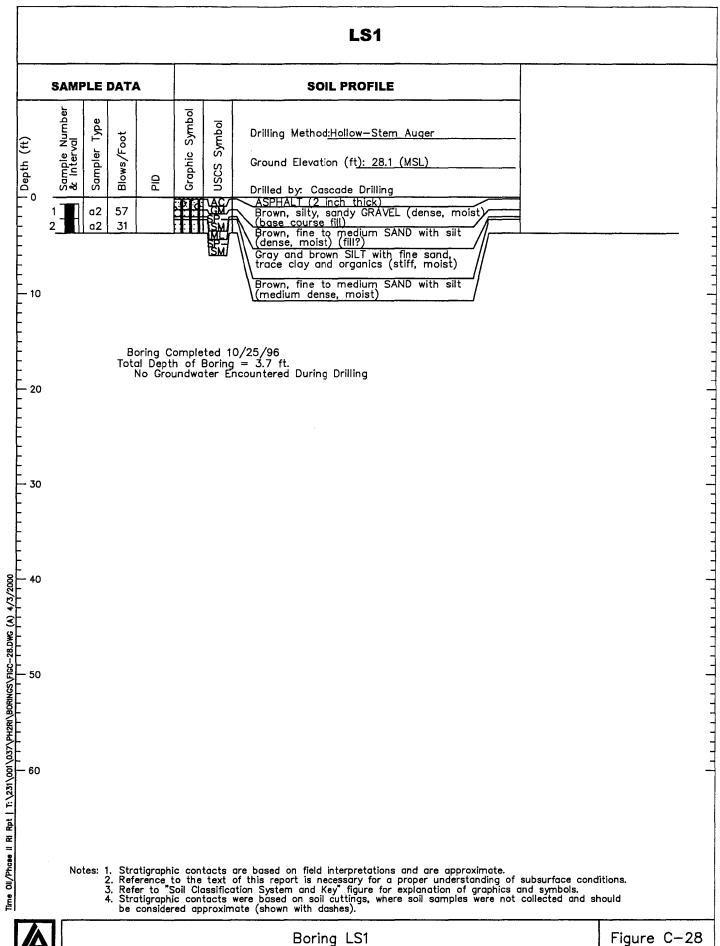
Figure C-25 (1 of 2)

SAMP	LE DATA		SOIL PROFILE	GROUNDWATER
pher	ψ.	lodr	Drilling Method: Hollow-stem Auger	-
Sample Number & Interval	Sampler Type Blows/Foot	Graphic Symbol USCS Symbol	Ground Elevation (ft): 29.7 (MSL)	Water Level
Inten	Sampler Ty Blows/Foot	Graphic	Drilled By: Cascade Drilling	ater
ගී •ජ 24 <b>■</b>	b2 23	0 5		\$
25	b2 22		Wood fragments at 41 to 44 ft.	
26	b2 55			
27	b2 58			
28	b2 60			
29	b2 36	I I SM	Dark gray, silty, medium SAND with fine sand	
30	b2 48	SP	(medium dense, wet)  Dark gray, fine to medium SAND with wood	_
31	b2 28	SP- SM	fragments (dense, wet)  Dark gray, fine and fine to medium SAND with silt (medium dense to dense, wet)	
32	b2 20		siit (meaium dense to dense, wet)	
33	b2 42	SP	Dark gray, fine to medium SAND (medium dense to dense, wet)	
34	b2 47		dollor to dollor, way	
35	b2 27			
36	b2 16			
37	b2 20			
38	b2 26			
39	b2 43			
40	b2 37			
41	b2 46			
42	b2 26			
43	b2 21			
44	b2 33			
45	b2 26			
46	b2 41			
47	b2 27			
	tes: 1. Stratig 2. Refere 3. Refer	raphic contacts are being to the text of this to "Soil Classification raphic contacts were	pased on field interpretations and are approximate. Is report is necessary for a proper understanding of subsurface In System and Key" figure for explanation of graphics and symbo In based on soil cuttings where soil samples were not collected a	ols,

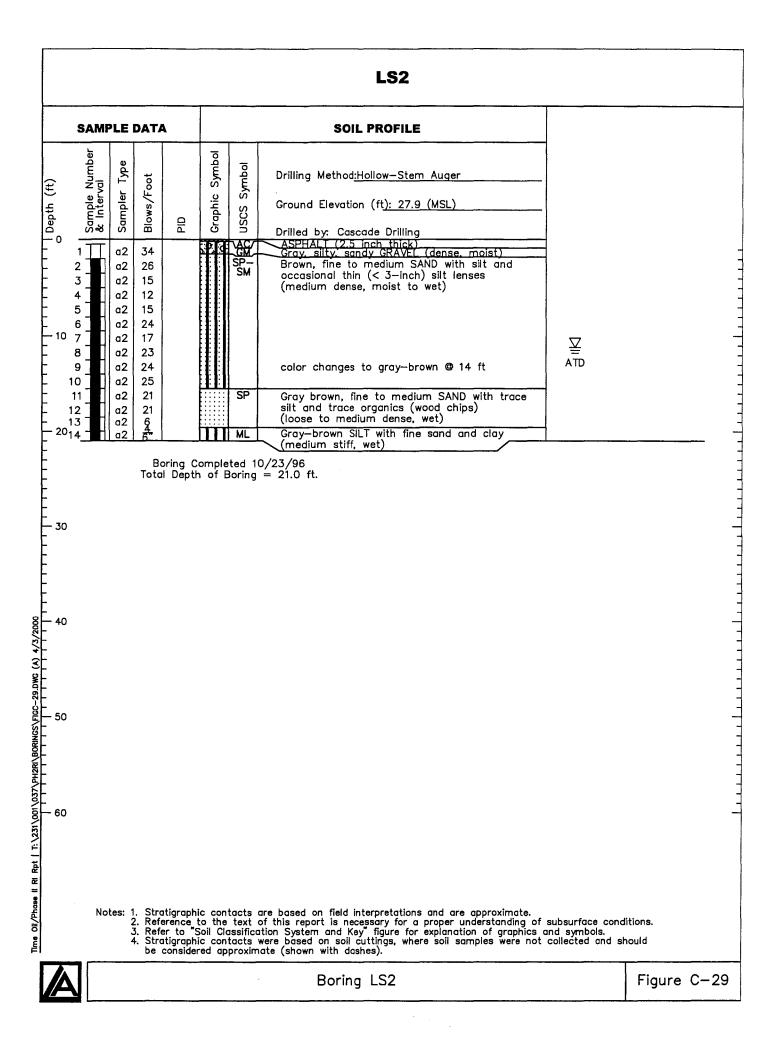
BZTO104(e)023117

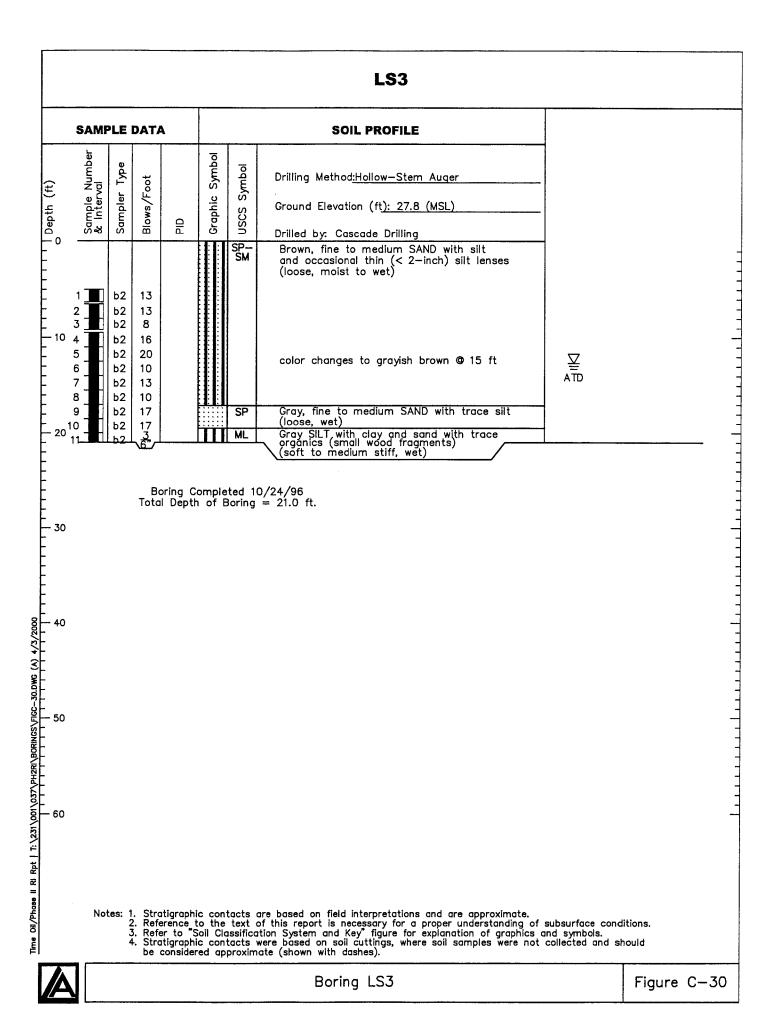
#### LB121 **SAMPLE DATA SOIL PROFILE** Sample Number & Interval Graphic Symbol Symbol Drilling Method: Hollow-Stem Auger Depth (ft) Blows/Foot Sampler Ground Elevation (ft): 28.0 (MSL) nscs 윤 Drilled by: Cascade Drilling ASPHALT (0.5 ft thick) Sandy GRAVEL (base course fill) Brown, fine to medium SAND with trace gravel and occasional silt lenses (loose to medium dense, moist to wet) d α2 41 0.0 α2 44 0.0 color becomes gray brown @ 7.5 ft α2 0.0 α2 24 0.0 color becomes dark brown @ 12.5 ft α2 0.0 α2 26 0.0 8 α2 23 0.0 α2 9 24 0.0 2010 α2 19 0.0 Gray to green—gray SILT with clay and trace sand (stiff, wet) a2 14 0.0 Boring Completed 03/17/97Total Depth of Boring = 22.5 ft. 30 40 4/2/2000 OI/Phose II RI Rpt | T:\Z31\001\037\PHZR\BORINGS\PIGC-26.DWG (A) Stratigraphic contacts are based on field interpretations and are approximate. Reference to the text of this report is necessary for a proper understanding of subsurface conditions. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols. Stratigraphic contacts were based on soil cuttings, where soil samples were not collected and should be considered approximate (shown with dashes). Figure C-26 Boring LB121





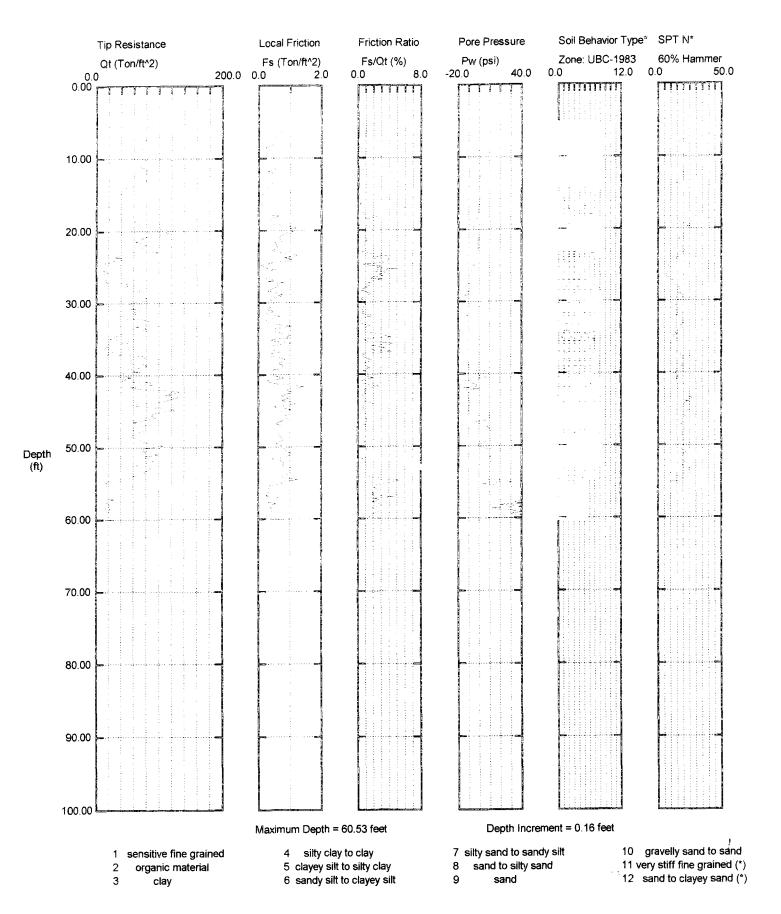






Operator: KDV/SVAN/GEOTECH

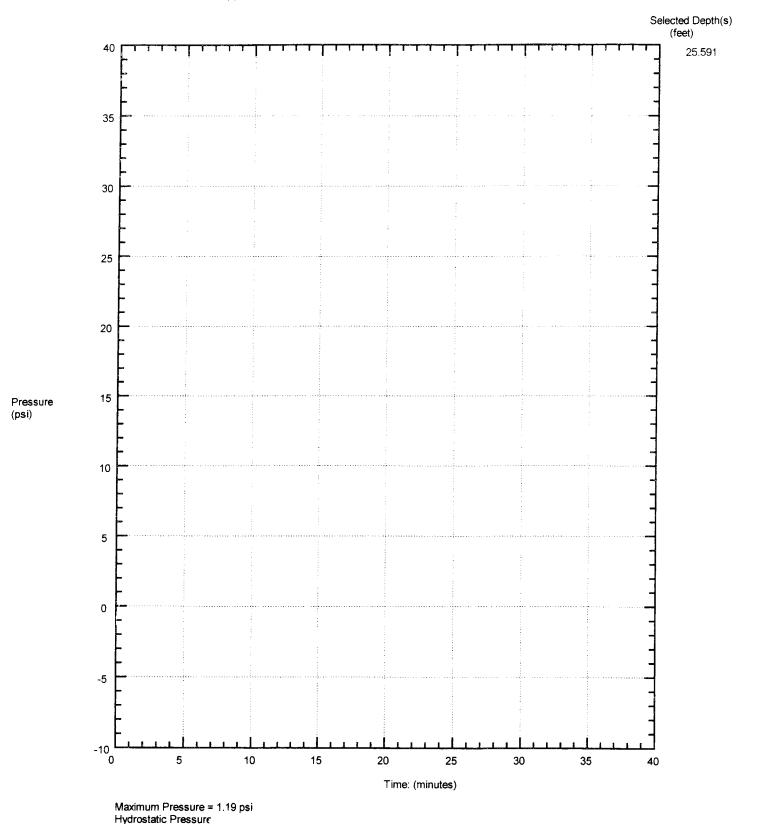
Sounding: FILG56 Cone Used: 4CH CPT Date/Time: 07-12-02 11:33 Location: P111-01 NW TERM Job Number: LANDAU/231009.31



#### LANDAU / P111-01 / NW TERMINAL

Operator KDV/SVAN/GEOTECH

Sounding: FILG56 Cone Used: 4CH CPT Date/Time: 07-12-02 11:33 Location: P111-01 NW TERM Job Number: LANDAU/231009.31

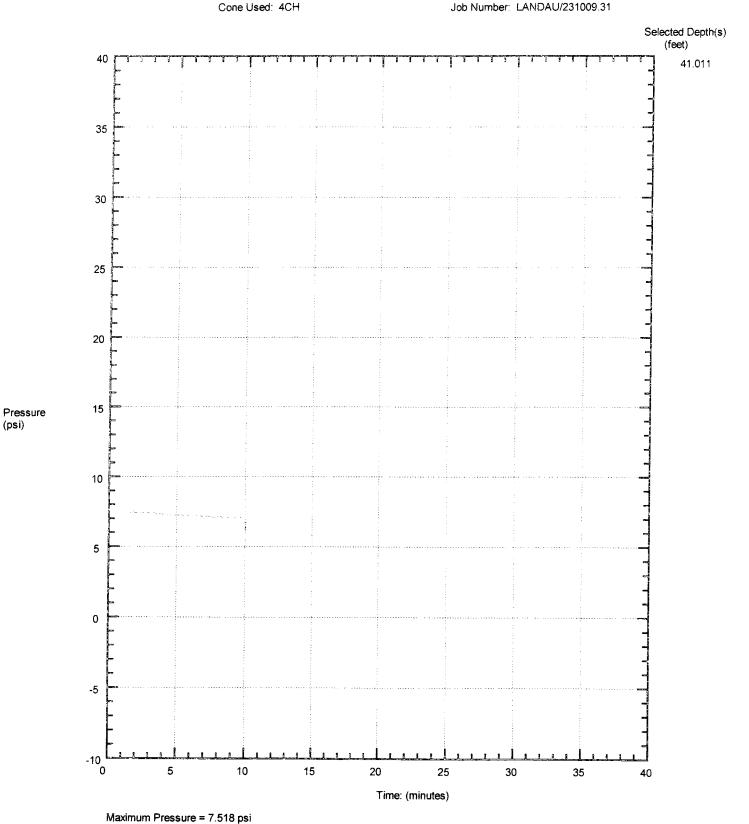


### LANDAU/P111-01/NW TERMINAL

Operator KDV/SVAN/GEOTECH Sounding: FILG56

Hydrostatic Pressure

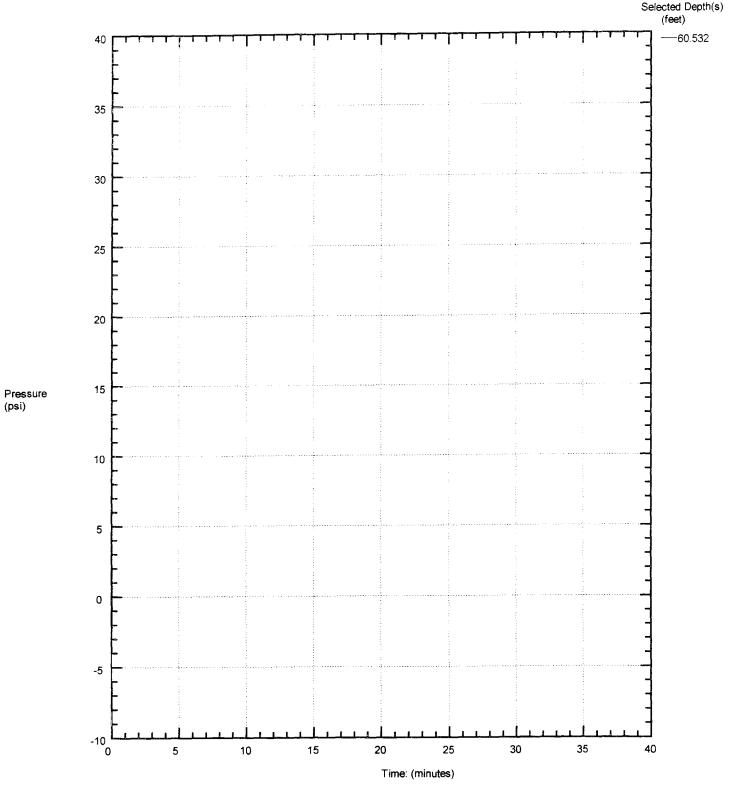
CPT Date/Time: 07-12-02 11:33 Location: P111-01 NW TERM Job Number: LANDAU/231009.31



# LANDAU / P111-01 / NW TERMINAL

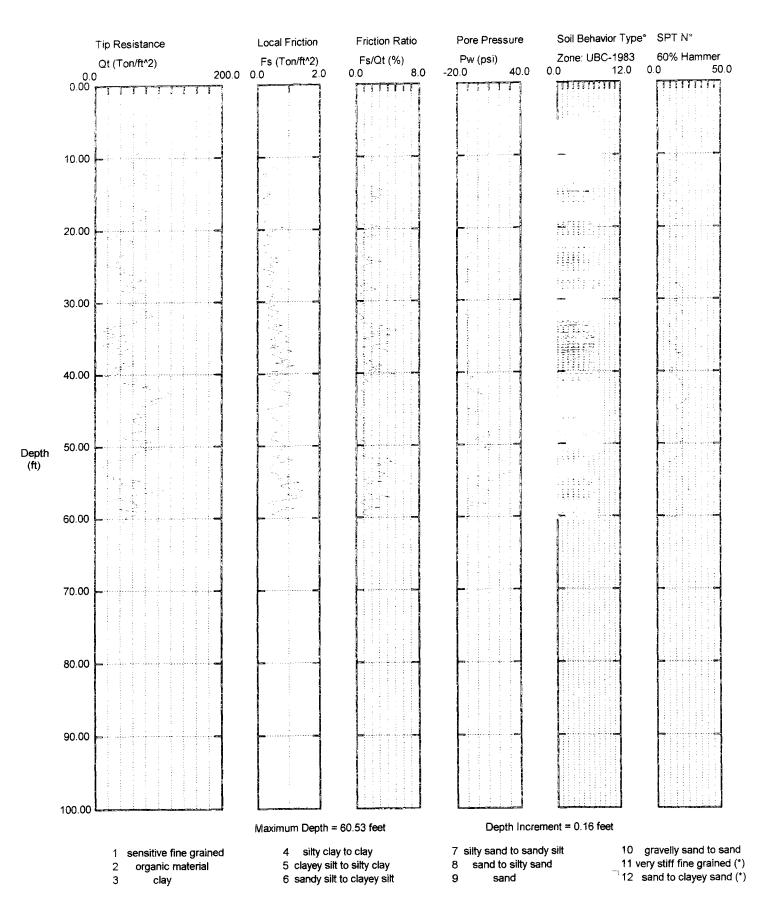
Operator KDV/SVAN/GEOTECH

Sounding: FILG56 Cone Used: 4CH CPT Date/Time: 07-12-02 11:33 Location: P111-01 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 16.154 psi Hydrostatic Pressure Operator: KDV/SVAN/GEOTECH

Sounding: FILG55 Cone Used: 4CH CPT Date/Time: 07-12-02 08:40 Location: P111-02 NW TERM Job Number: LANDAU/231009 31

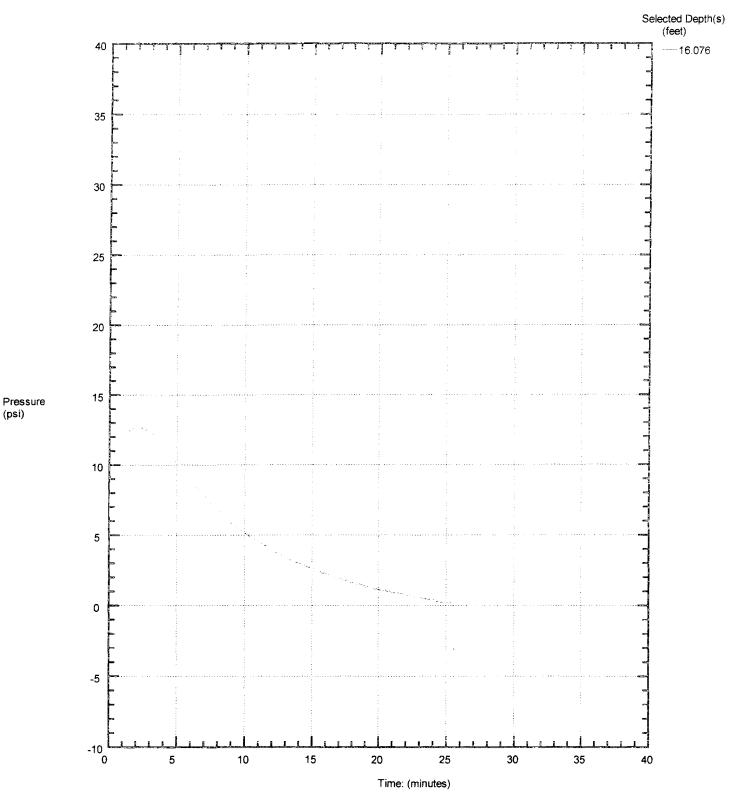


## ANDAU / P111-02 / NW TERMINAL

Operator KDV/SVAN/GEOTECH

Sounding: FILG55 Cone Used: 4CH

CPT Date/Time: 07-12-02 08:40 Location: P111-02 NW TERM Job Number: LANDAU/231009.31

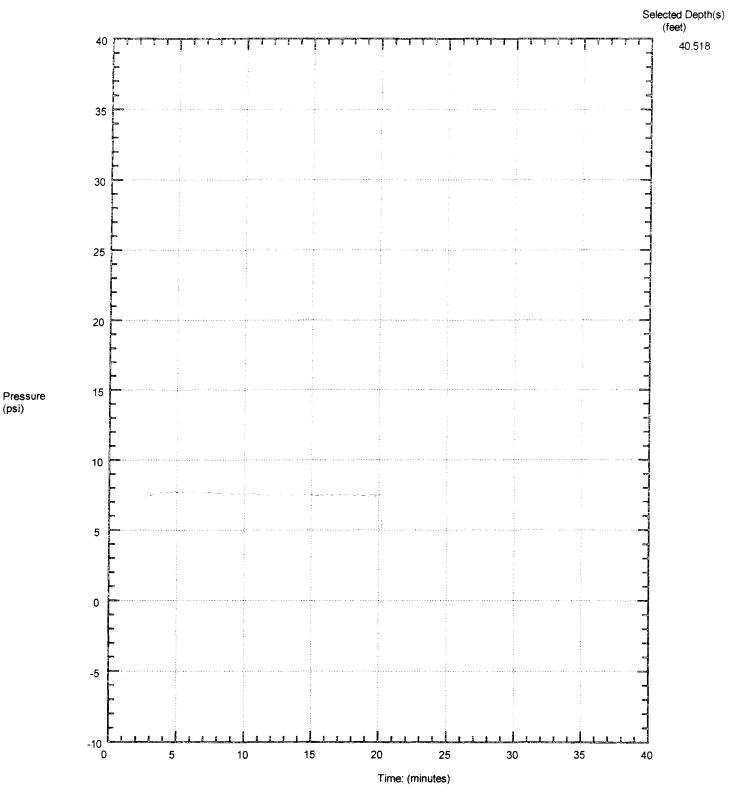


Maximum Pressure = 12.95 psi Hydrostatic Pressure

(psi)

Operator KDV/SVAN/GEOTECH

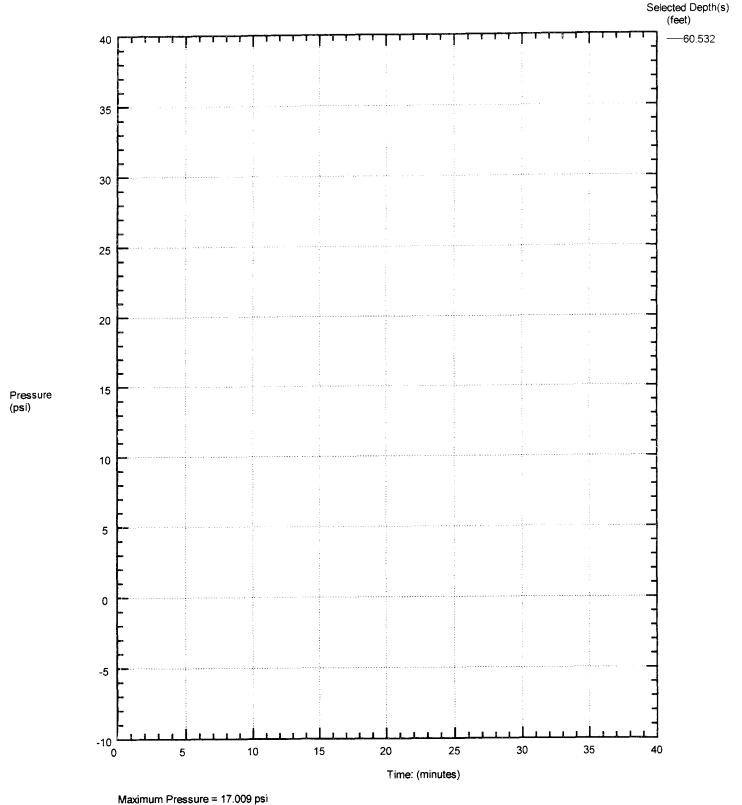
Sounding: FILG55 Cone Used: 4CH CPT Date/Time: 07-12-02 08:40 Location: P111-02 NW TERM Job Number: LANDAU/231009 31



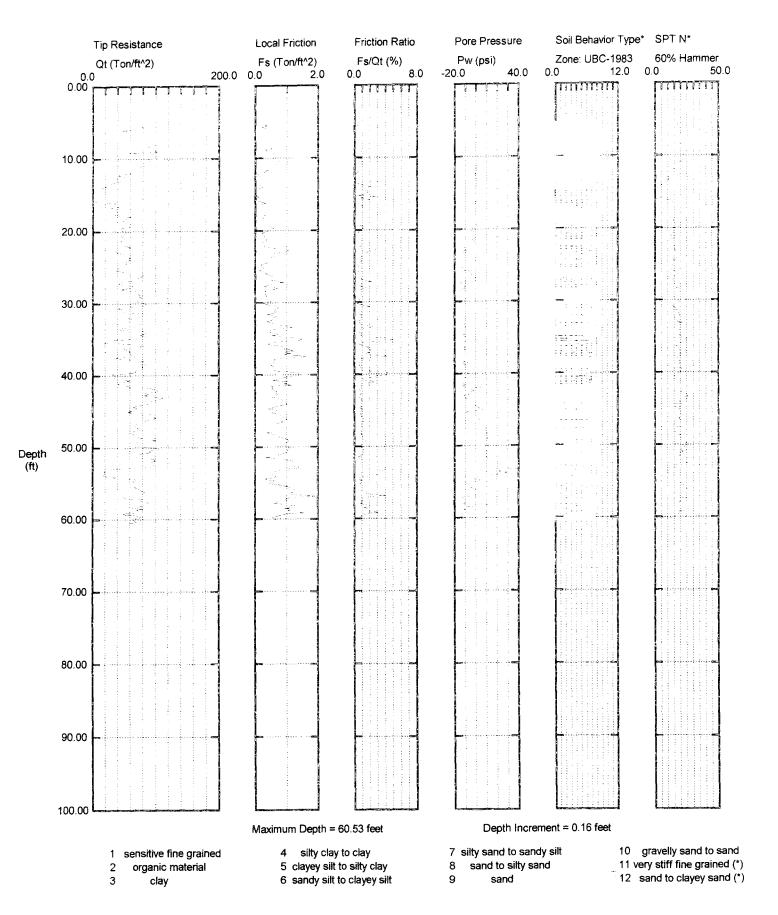
Maximum Pressure = 7.741 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

Sounding: FILG55 Cone Used: 4CH CPT Date/Time: 07-12-02 08:40 Location: P111-02 NW TERM Job Number: LANDAU/231009.31

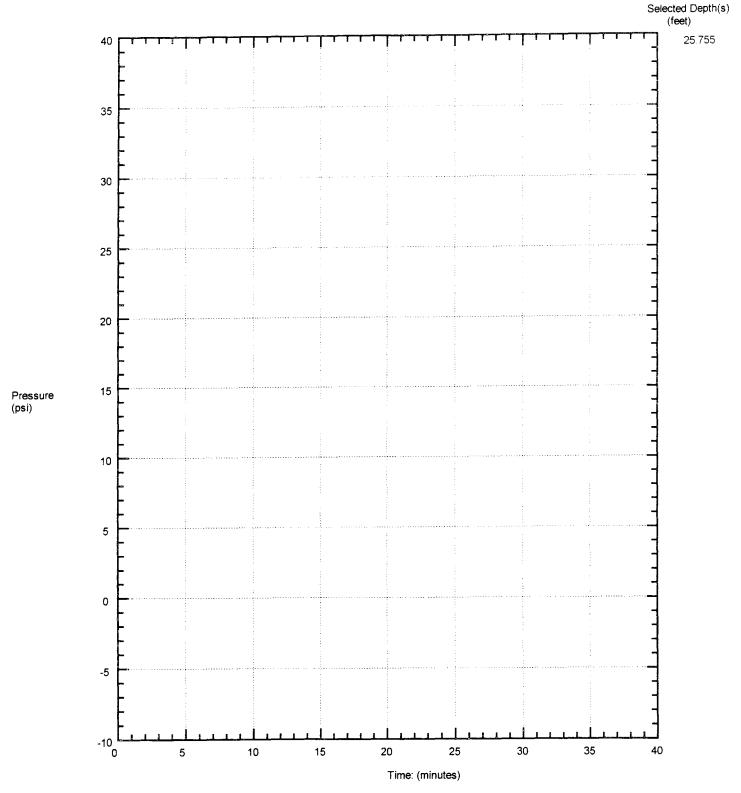


Sounding: FILG57 Cone Used: 4CH CPT Date/Time: 07-12-02 13:40 Location: P111-03 NV/ TERM Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

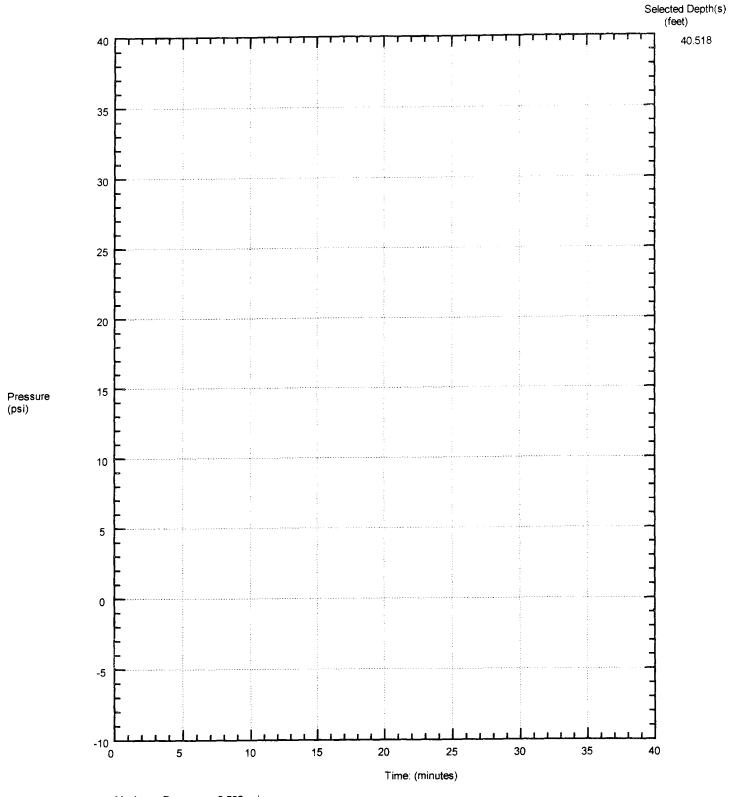
Sounding: FILG57 Cone Used: 4CH CPT Date/Time: 07-12-02 13:40 Location: P111-03 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 0.793 psi Hydrostatic Pressure :

Operator KDV/SVAN/GEOTECH

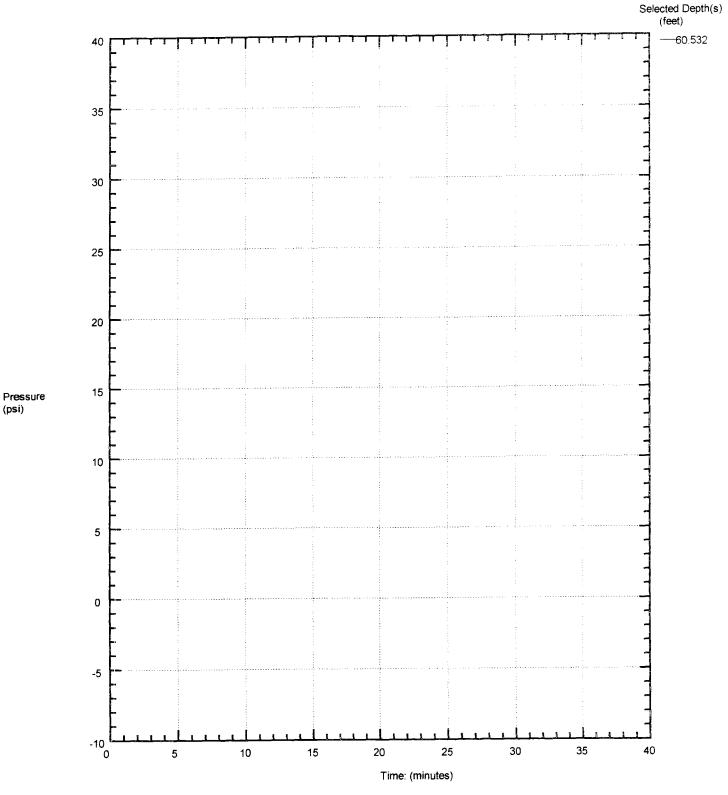
Sounding: FILG57 Cone Used: 4CH CPT Date/Time: 07-12-02 13:40 Location: P111-03 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 6.592 psi Hydrostatic Pressure

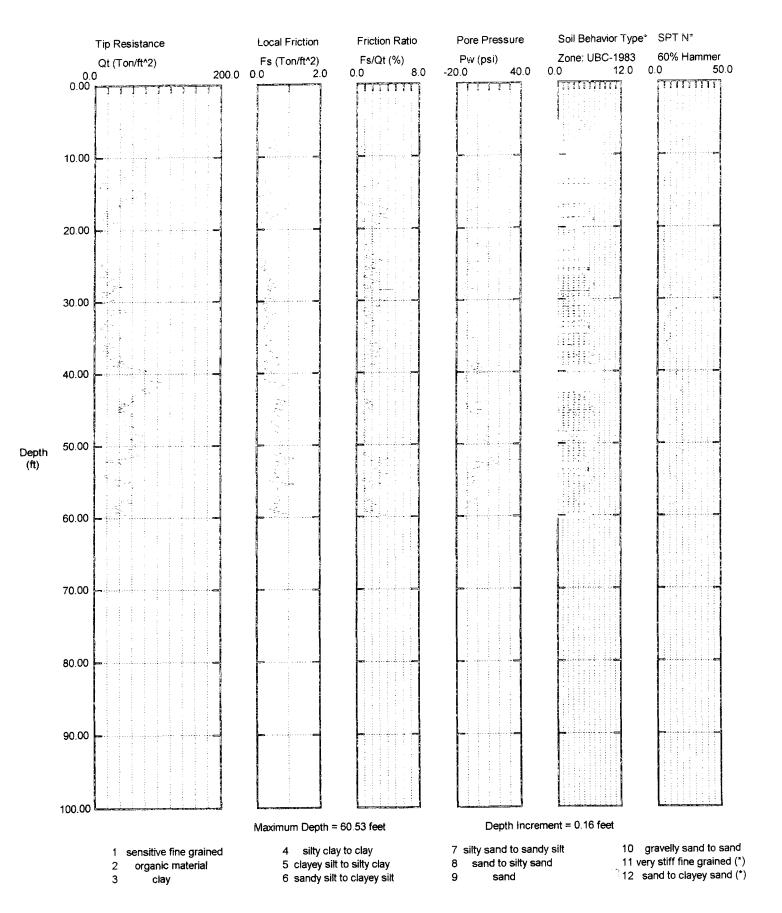
Operator KDV/SVAN/GEOTECH

Sounding: FILG57 Cone Used: 4CH CPT Date/Time: 07-12-02 13:40 Location: P111-03 NW TERM Job Number: LANDAU/231009.31



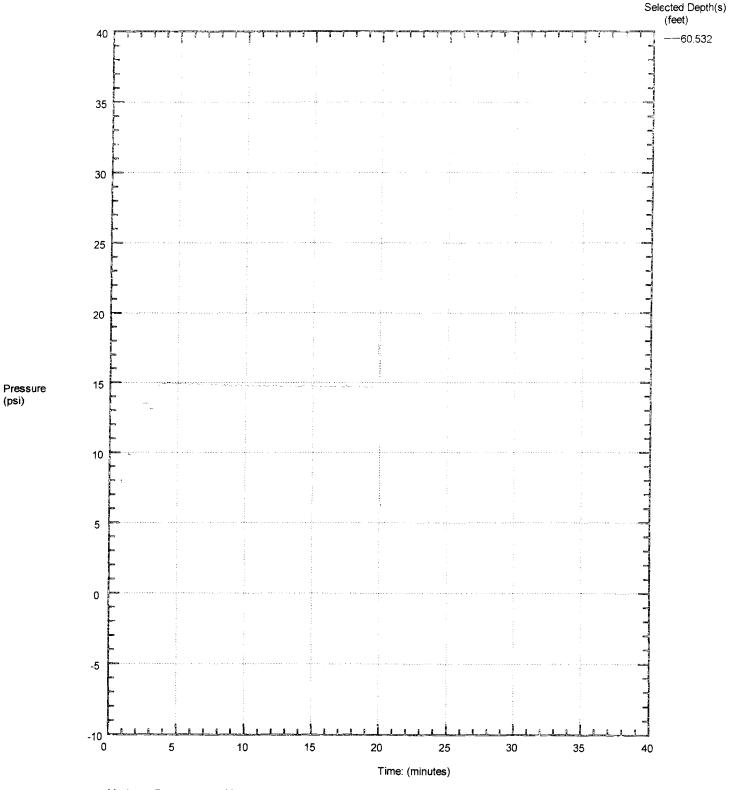
Maximum Pressure = 16.612 psi Hydrostatic Pressure

Sounding: FILG53 Cone Used: 4CH CPT Date/Time: 07-12-02 06:51 Location: P111-04 NW TERM Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

Sounding: FILG53 Cone Used: 4CH CPT Date/Time: 07-12-02 06:51 Location: P111-04 NW TERM Job Number: LANDAU/231009.31

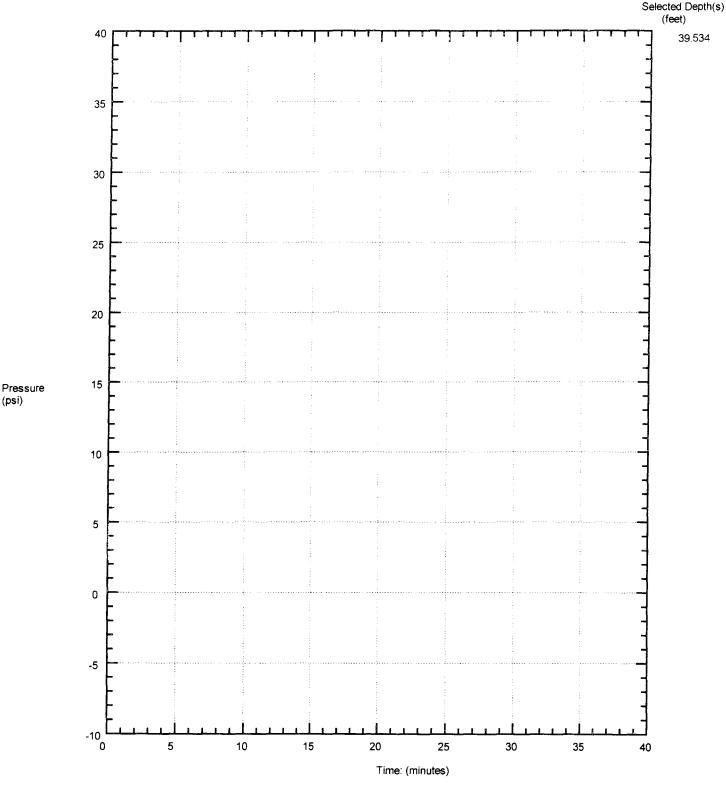


Maximum Pressure = 19.338 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH Sounding: FILG53

Cone Used: 4CH

CPT Date/Time: 07-12-02 06:51 Location: P111-04 NW TERM Job Number: LANDAU/231009.31

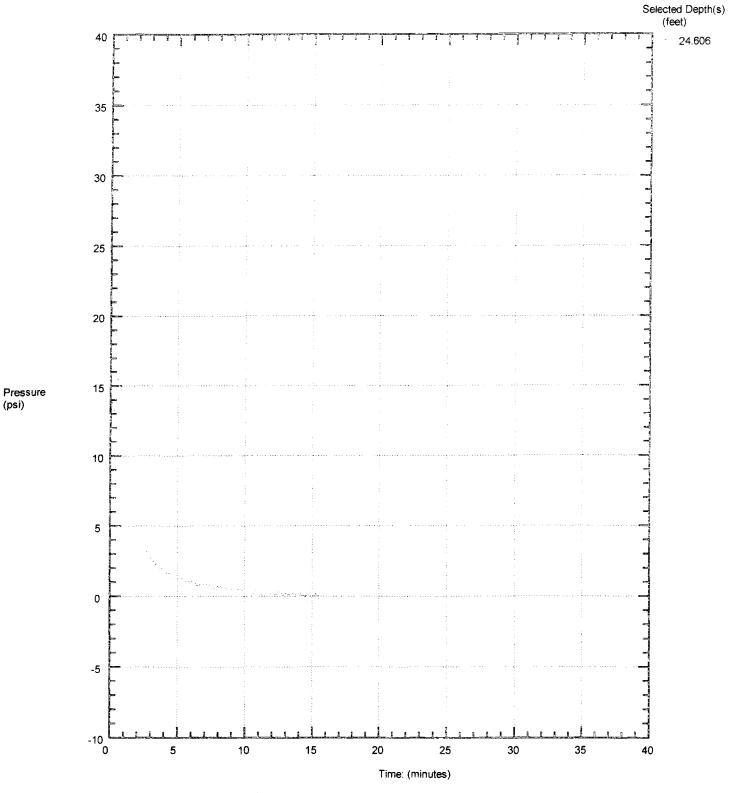


Maximum Pressure = 6.368 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

Sounding: FILG53 Cone Used: 4CH

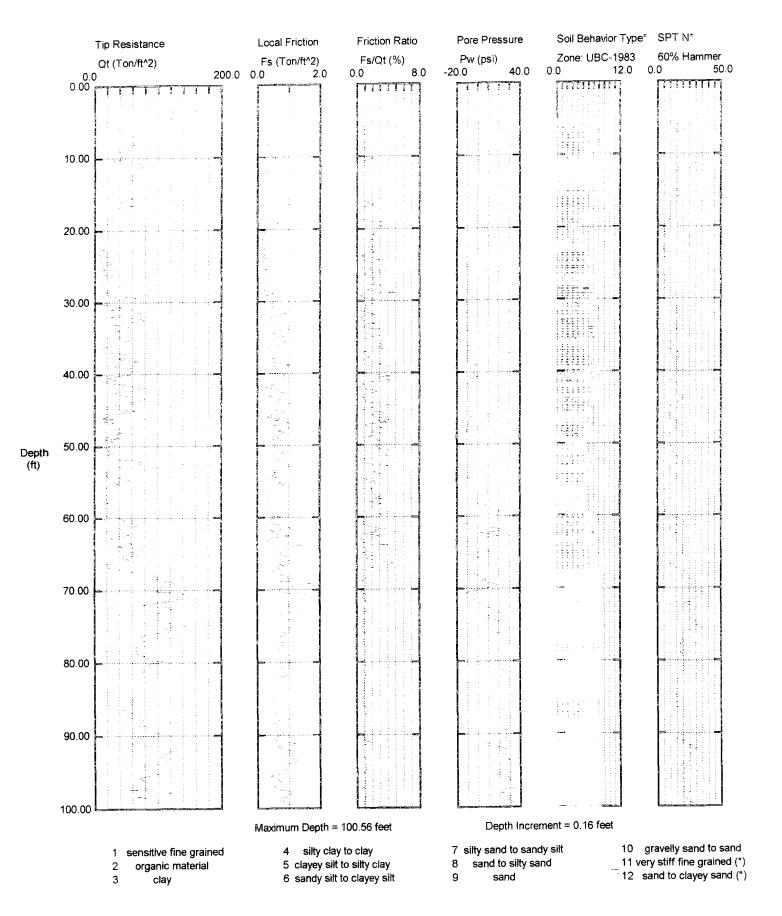
CPT Date/Time: 07-12-02 06:51 Location: P111-04 NVV TERM Job Number: LANDAU/231009.31



Maximum Pressure = 15.595 psi Hydrostatic Pressure

(psi)

Sounding: FILG43 Cone Used: 4CH CPT Date/Time: 07-10-02 06:33 Location: P111-05 NW TERMI Job Number: LANDAU/231009.31

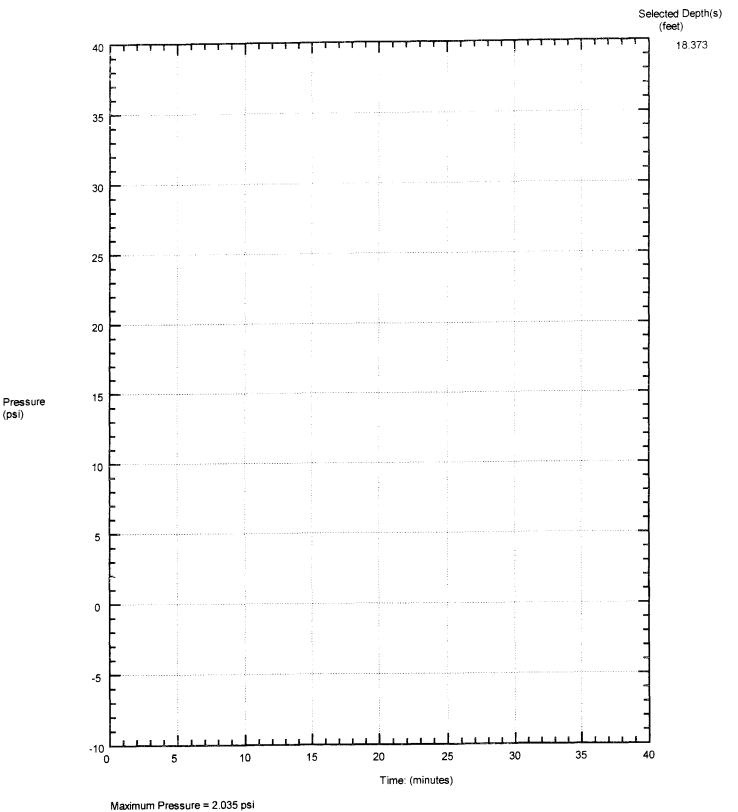


Operator KDV/SVAN/GEOTECH

Sounding: FILG43 Cone Used: 4CH

Hydrostatic Pressure

CPT Date/Time: 07-10-02 06:33 Location: P111-05 NW TERMI Job Number: LANDAU/231009.31

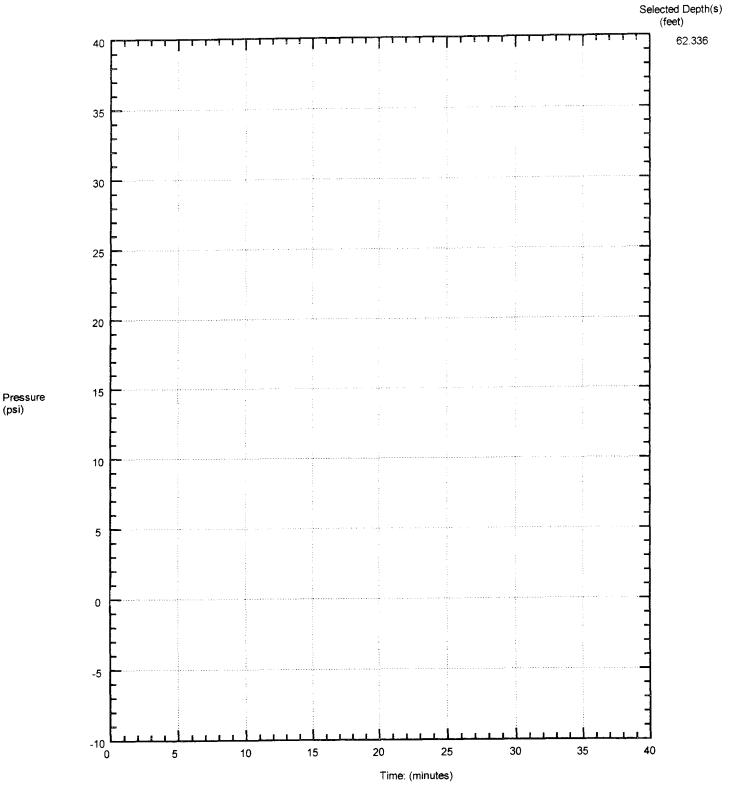


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Operator KDV/SVAN/GEOTECH

Sounding: FILG43 Cone Used: 4CH

CPT Date/Time: 07-10-02 06:33 Location: P111-05 NW TERMI Job Number: LANDAU/231009.31



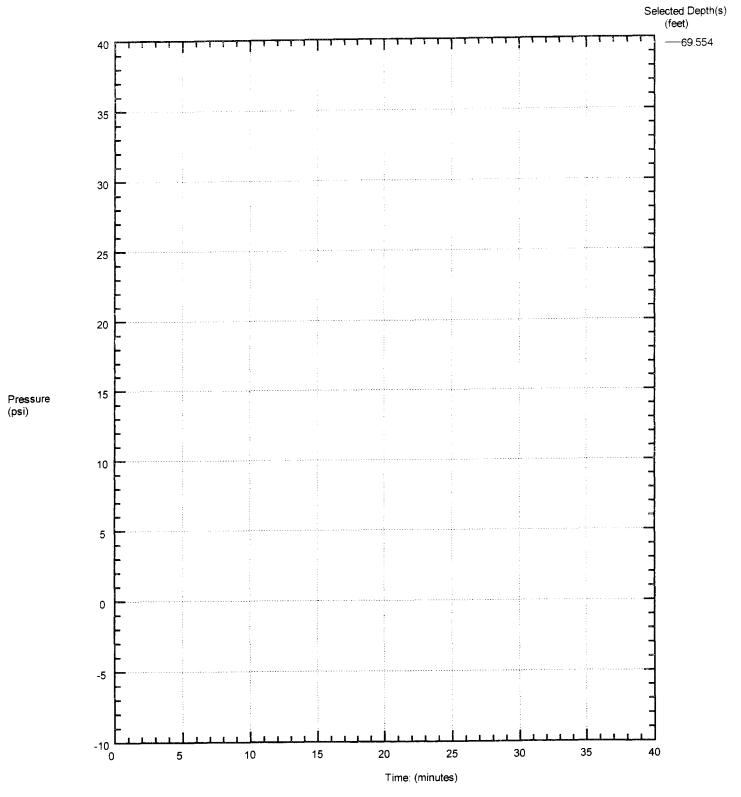
Maximum Pressure = 15.94 psi Hydrostatic Pressure

(psi)

Operator KDV/SVAN/GEOTECH Sounding: FILG43

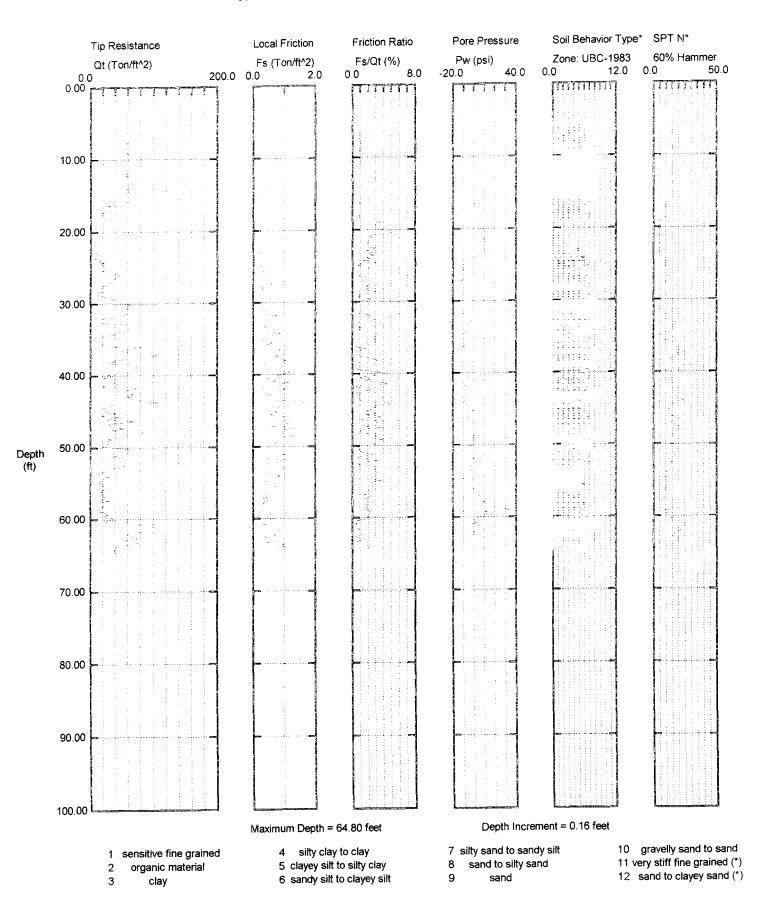
Cone Used: 4CH

CPT Date/Time: 07-10-02 06:33 Location: P111-05 NW TERMI Job Number: LANDAU/231009.31



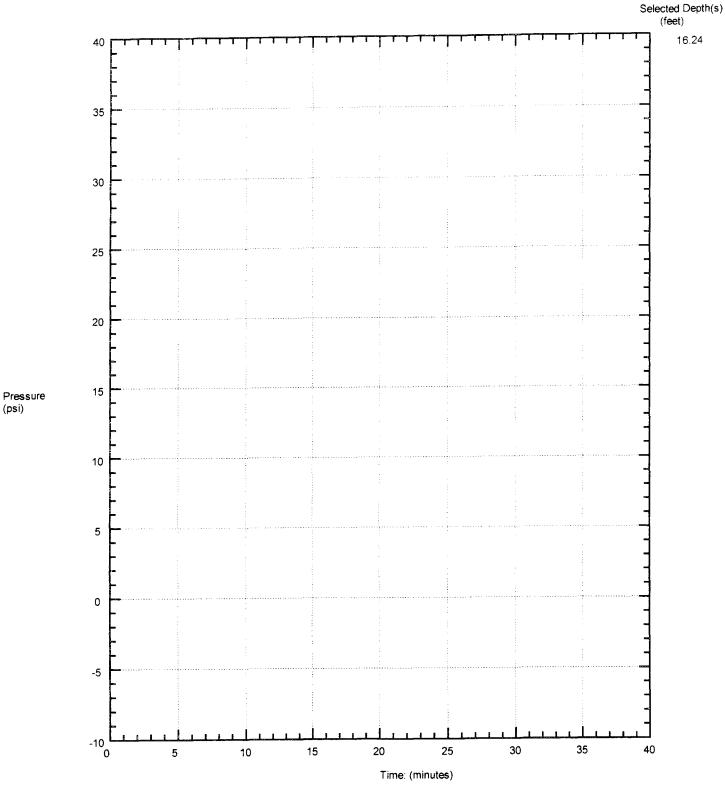
Maximum Pressure = 19.898 psi Hydrostatic Pressure

Sounding: FILG58 Cone Used: 4CH CPT Date/Time: 07-15-02 06:13 Location: P111-06 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

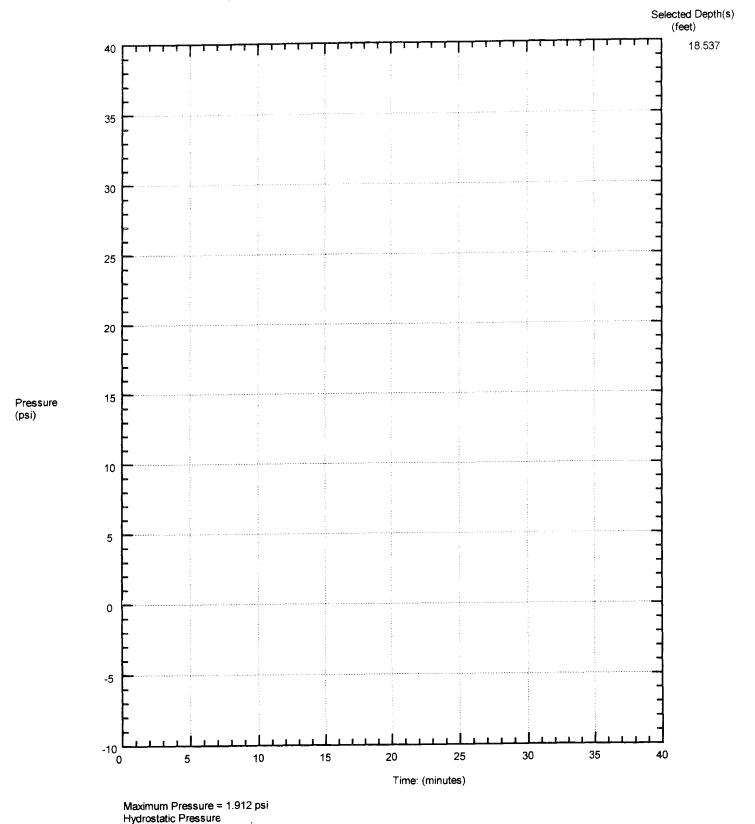
Sounding: FILG58 Cone Used: 4CH CPT Date/Time: 07-15-02 06:13 Location: P111-06 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 2.675 psi Hydrostatic Pressur

Operator KDV/SVAN/GEOTECH

Sounding: FILG58 Cone Used: 4CH CPT Date/Time: 07-15-02 06:13 Location: P111-06 NW TERMI Job Number: LANDAU/231009.31

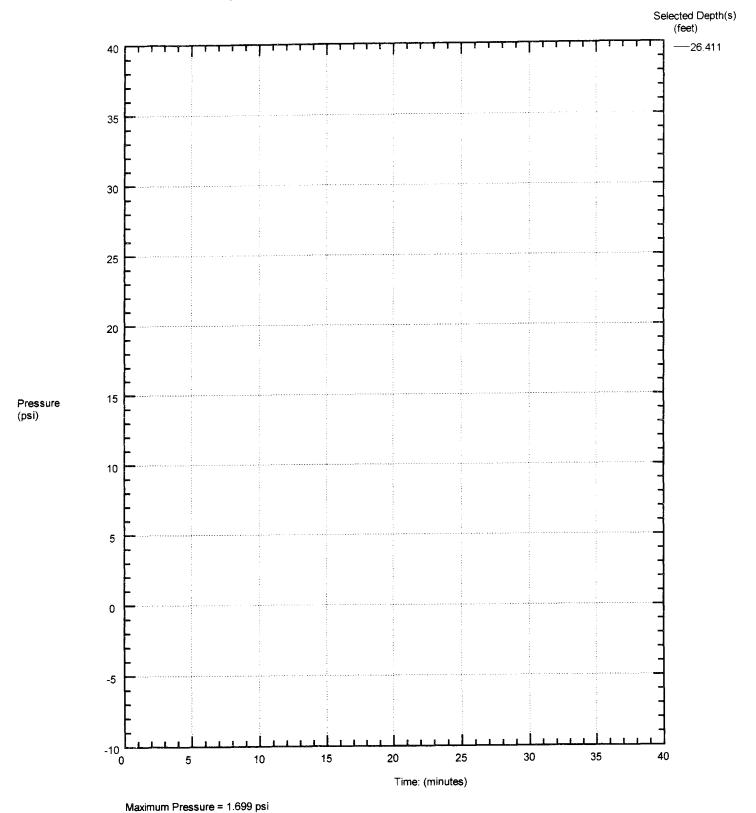


Operator KDV/SVAN/GEOTECH

Sounding: FILG58 Cone Used: 4CH

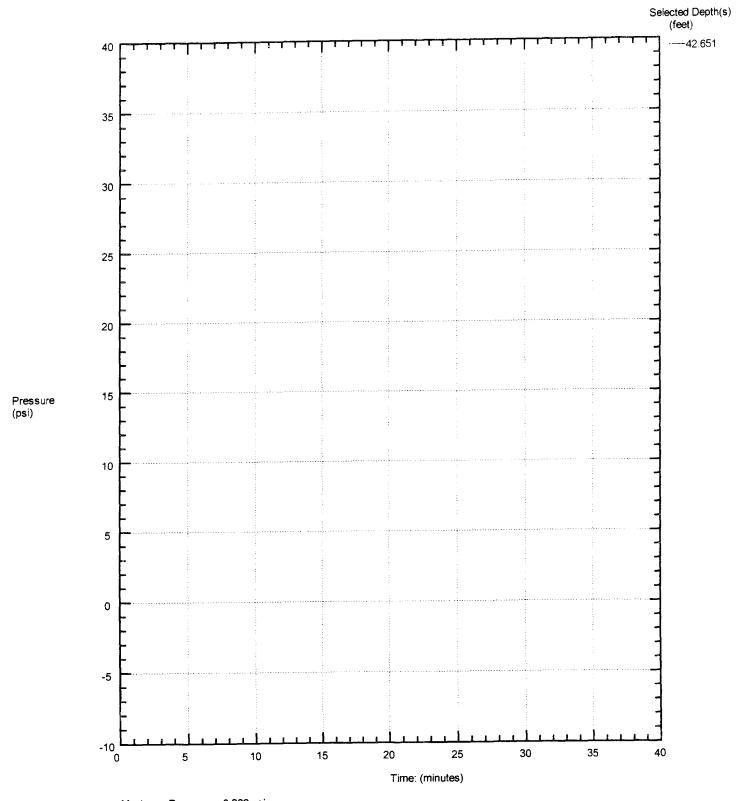
Hydrostatic Pressure

CPT Date/Time: 07-15-02 06:13 Location: P111-06 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

Sounding: FILG58 Cone Used: 4CH CPT Date/Time: 07-15-02 06:13 Location: P111-06 NW TERMI Job Number: LANDAU/231009.31

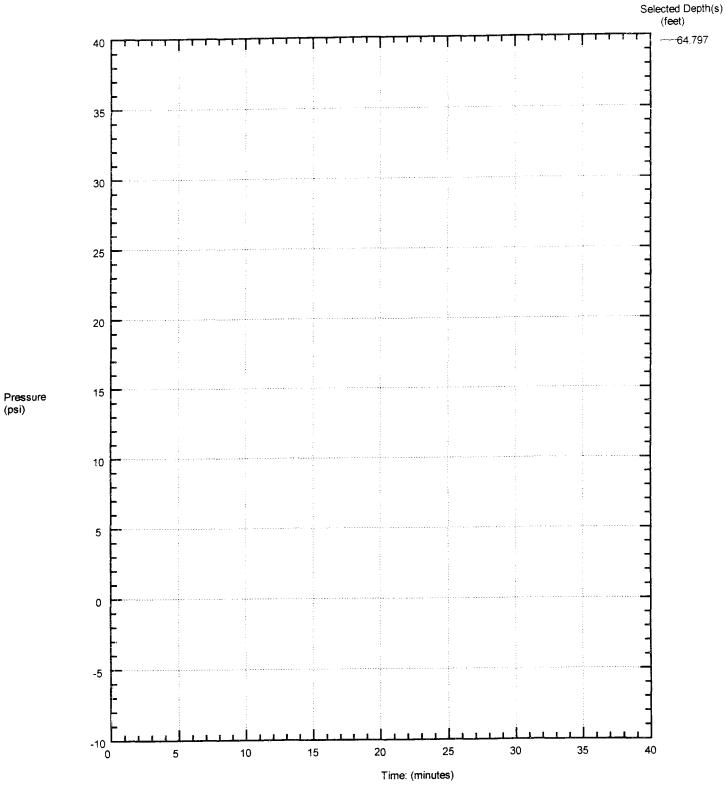


Maximum Pressure = 8.962 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH Sounding: FILG58

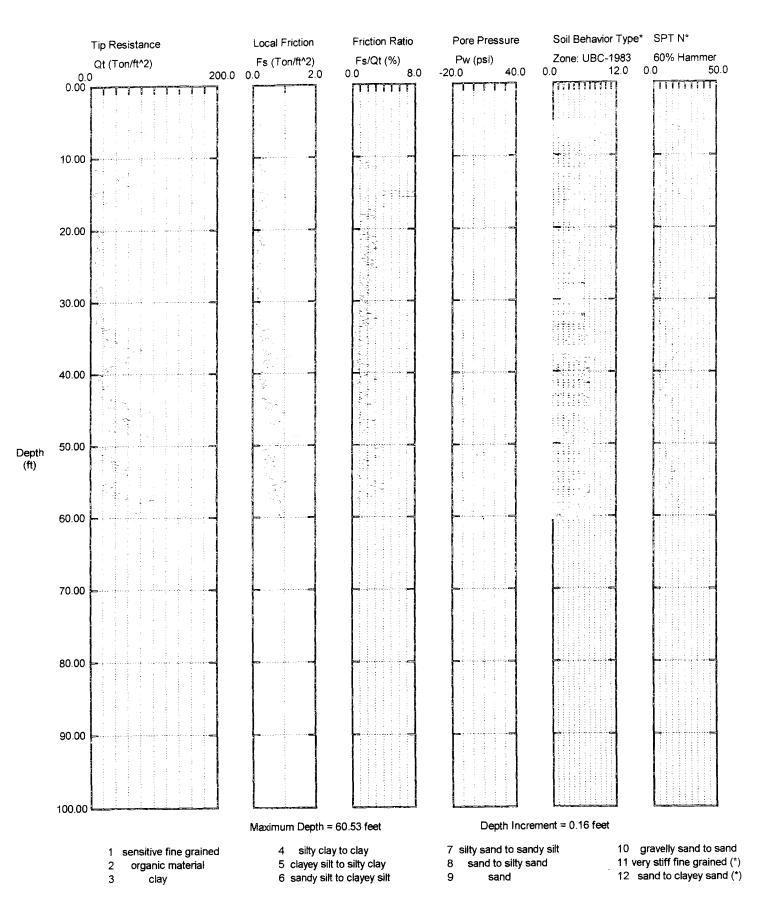
Cone Used: 4CH

CPT Date/Time: 07-15-02 06:13 Location: P111-06 NW TERMI Job Number: LANDAU/231009.31



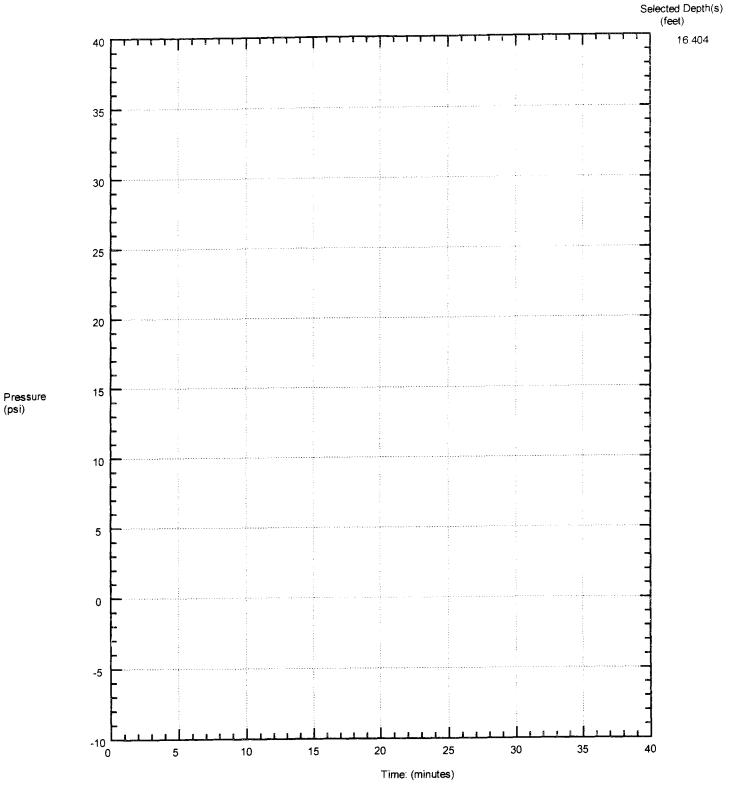
Maximum Pressure = 18.056 psi Hydrostatic Pressure

Sounding: FILG59 Cone Used: 4CH CPT Date/Time: 07-15-02 08:11 Location: P111-07 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

Sounding: FILG59 Cone Used: 4CH CPT Date/Time: 07-15-02 08:11 Location: P111-07 NW TERMI Job Number: LANDAU/231009.31

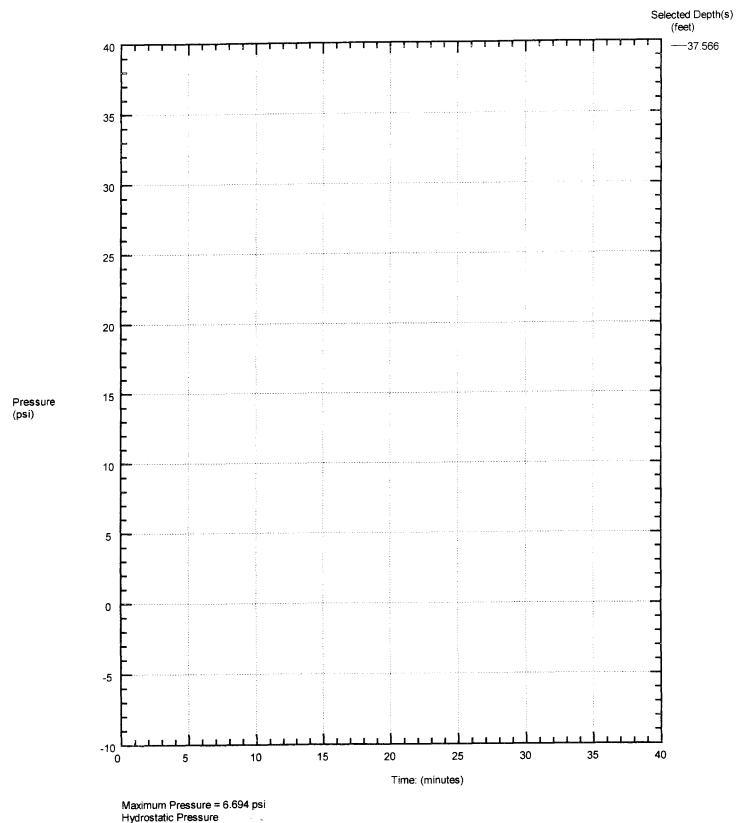


Maximum Pressure = 1.068 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH Sounding: FILG59

Cone Used: 4CH

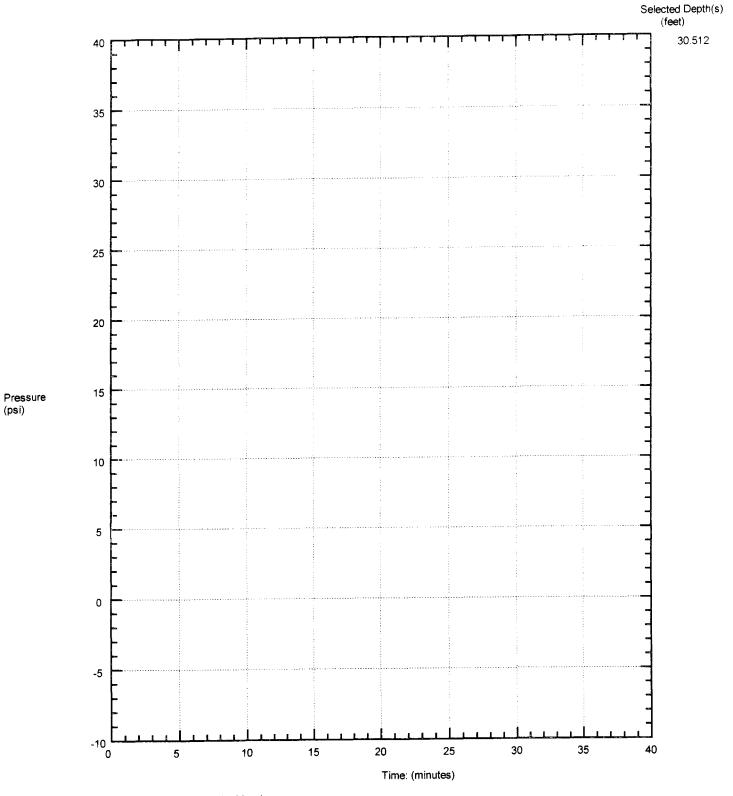
CPT Date/Time: 07-15-02 08:11 Location: P111-07 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH Sounding: FILG59

Cone Used: 4CH

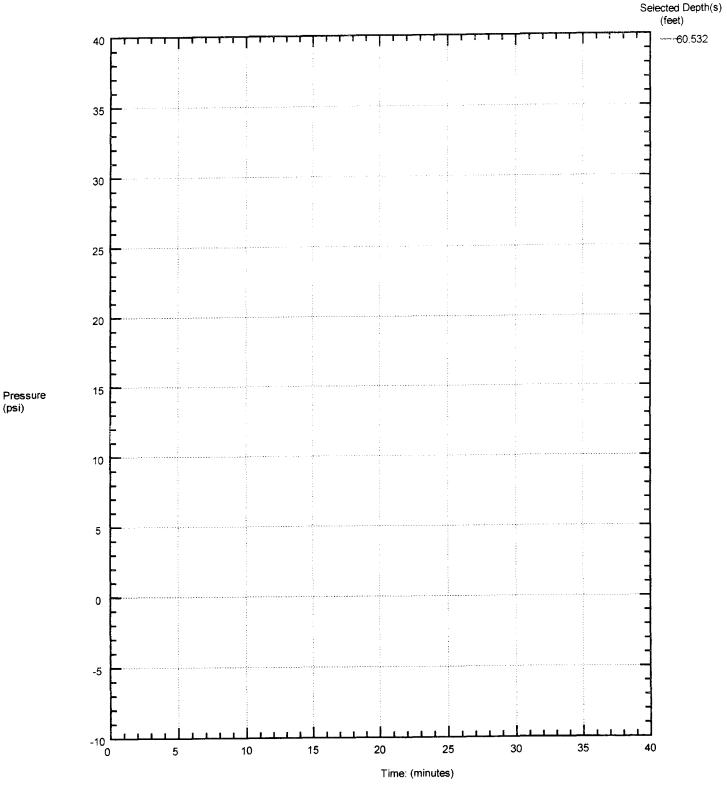
CPT Date/Time: 07-15-02 08:11 Location: P111-07 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 10.396 psi Hydrostatic Pressure

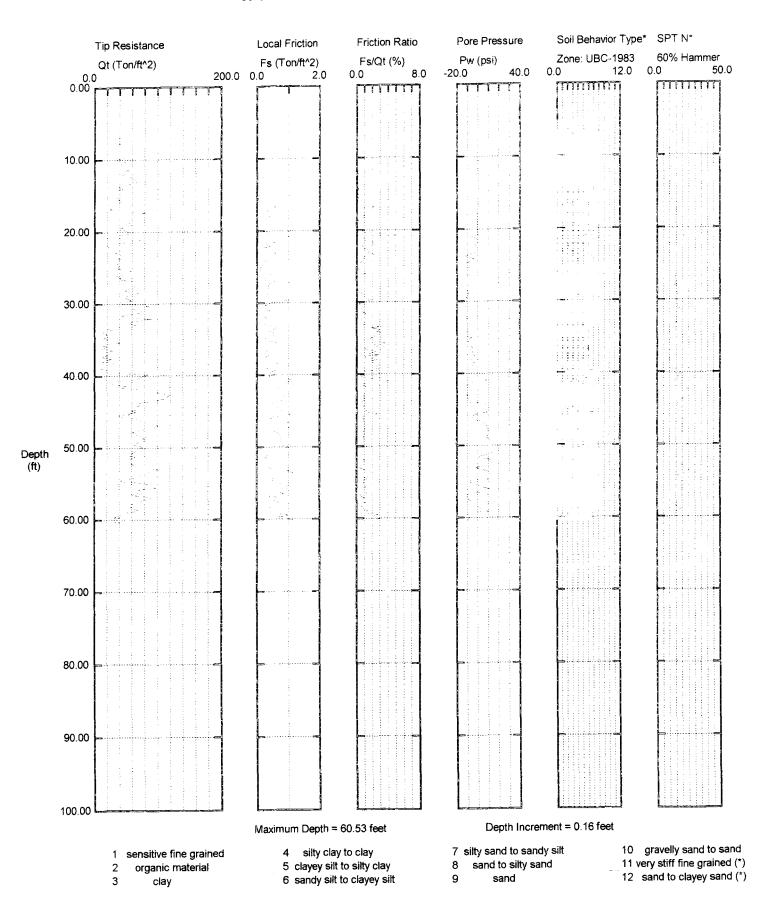
Operator KDV/SVAN/GEOTECH

Sounding: FILG59 Cone Used: 4CH CPT Date/Time: 07-15-02 08:11 Location: P111-07 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 16.642 psi Hydrostatic Pressure

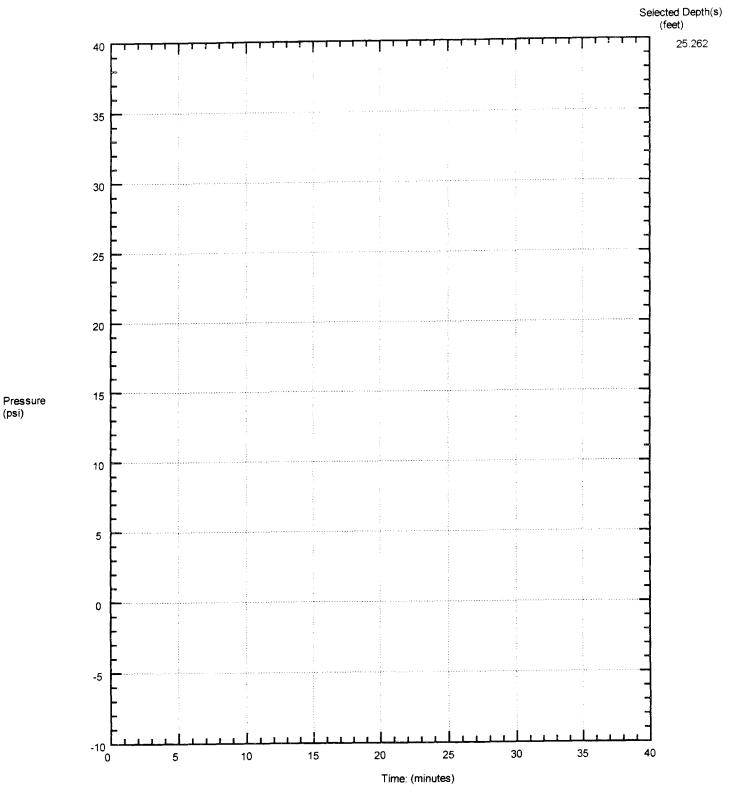
Sounding: FILG60 Cone Used: 4CH CPT Date/Time: 07-15-02 10:05 Location: P111-08 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH Sounding: FILG60

Cone Used: 4CH

CPT Date/Time: 07-15-02 10:05 Location: P111-08 NW TERMI Job Number: LANDAU/231009.31

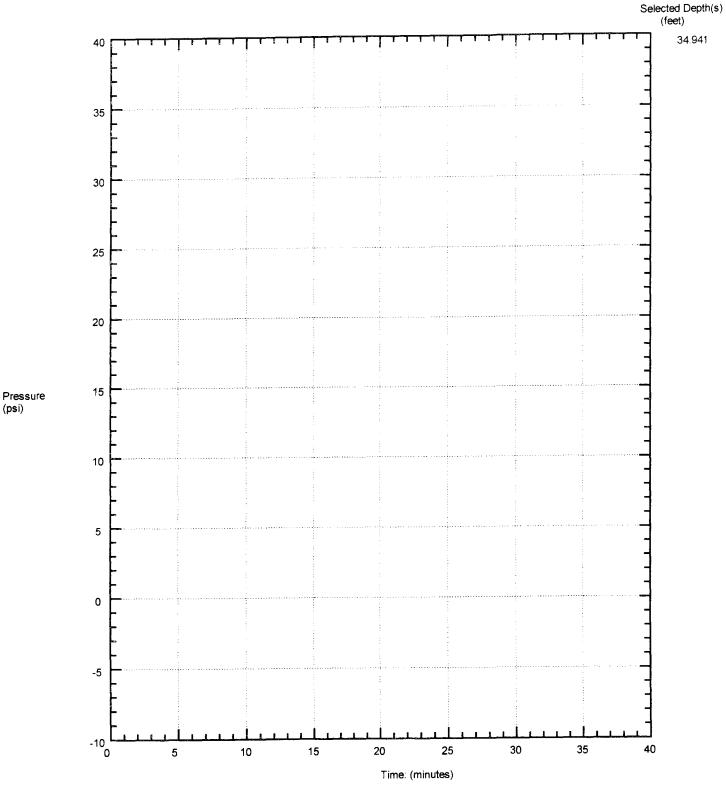


Maximum Pressure = 0.671 psi Hydrostatic Pressure

(psi)

Operator KDV/SVAN/GEOTECH

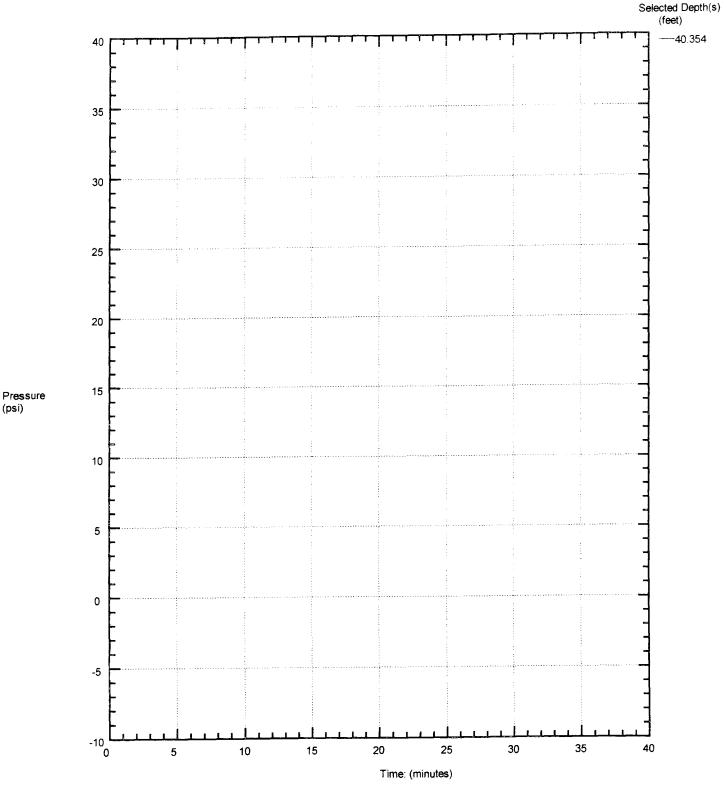
Sounding: FILG60 Cone Used: 4CH CPT Date/Time: 07-15-02 10:05 Location: P111-08 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 4.547 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

Sounding: FILG60 Cone Used: 4CH CPT Date/Time: 07-15-02 10:05 Location: P111-08 NW TERMI Job Number: LANDAU/231009.31

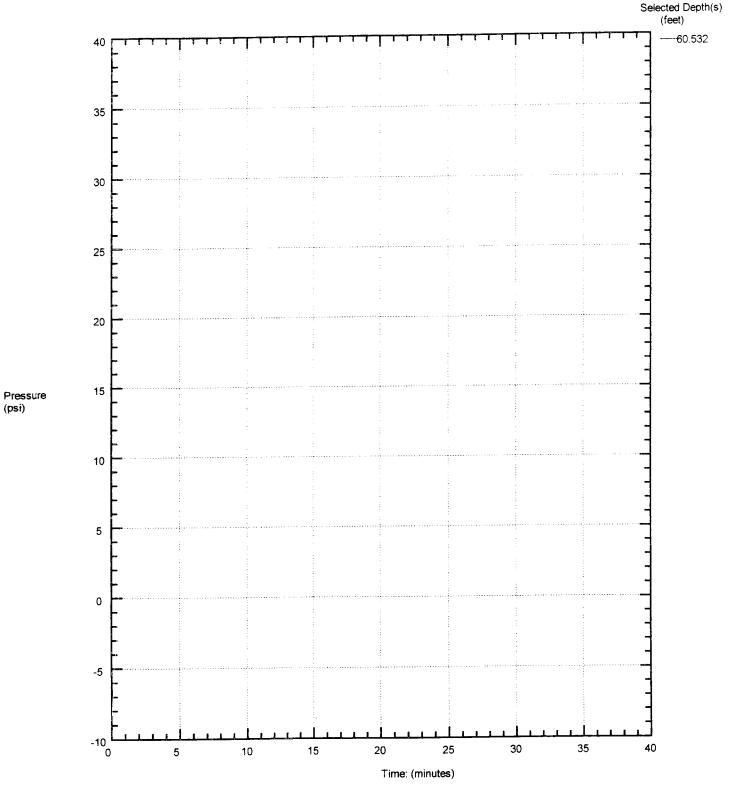


Maximum Pressure = 7.375 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH Sounding: FILG60

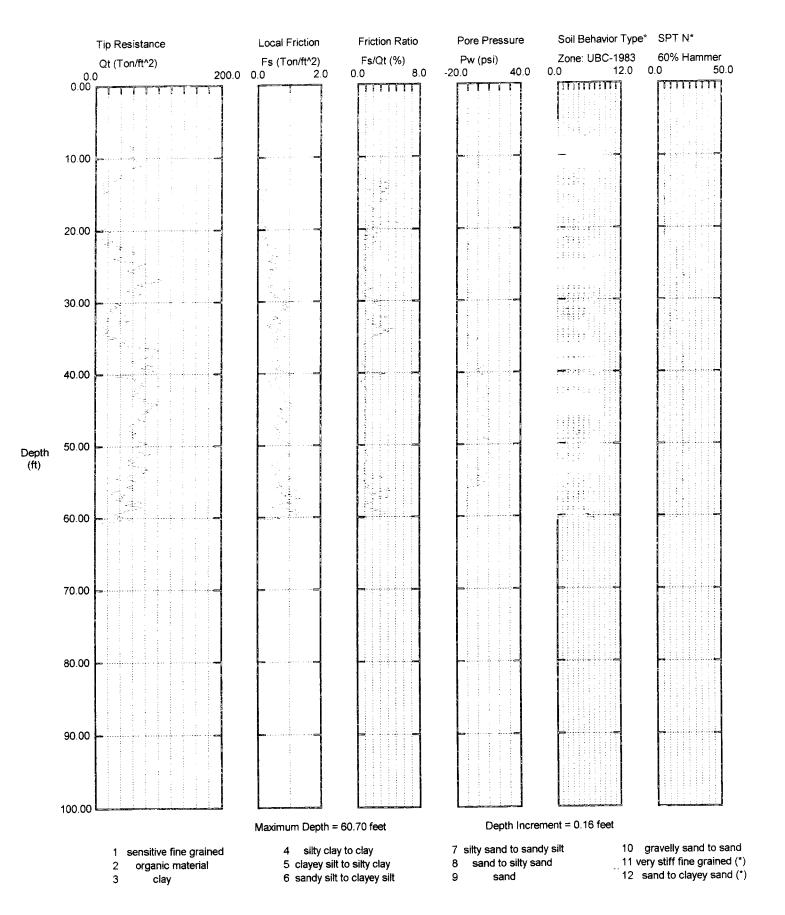
Cone Used: 4CH

CPT Date/Time: 07-15-02 10:05 Location: P111-08 NW TERMI Job Number: LANDAU/231009.31



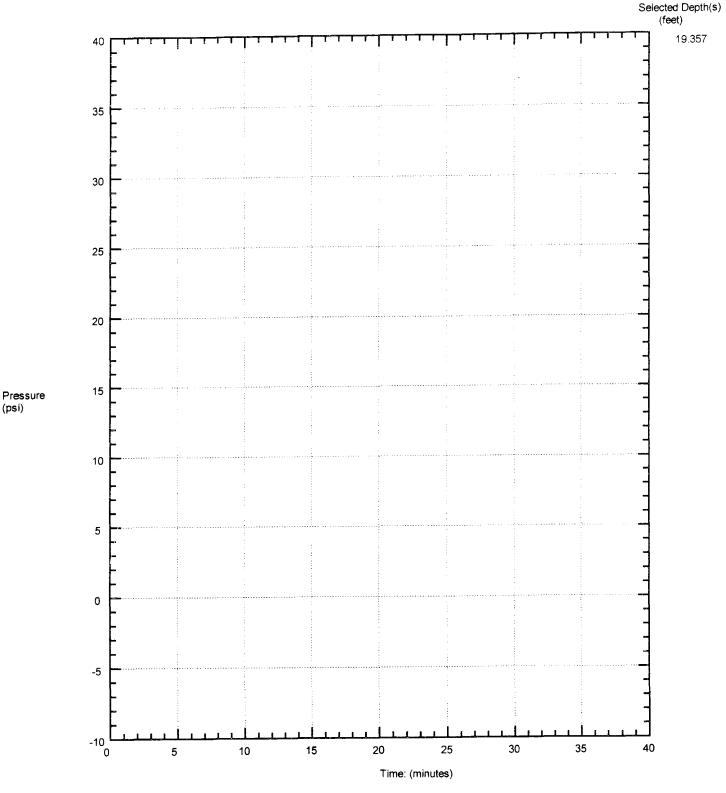
Maximum Pressure = 16.744 psi Hydrostatic Pressure

Sounding: FILG51 Cone Used: 4CH CPT Date/Time: 07-11-02 12:58 Location: P111-09 NW TERM Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

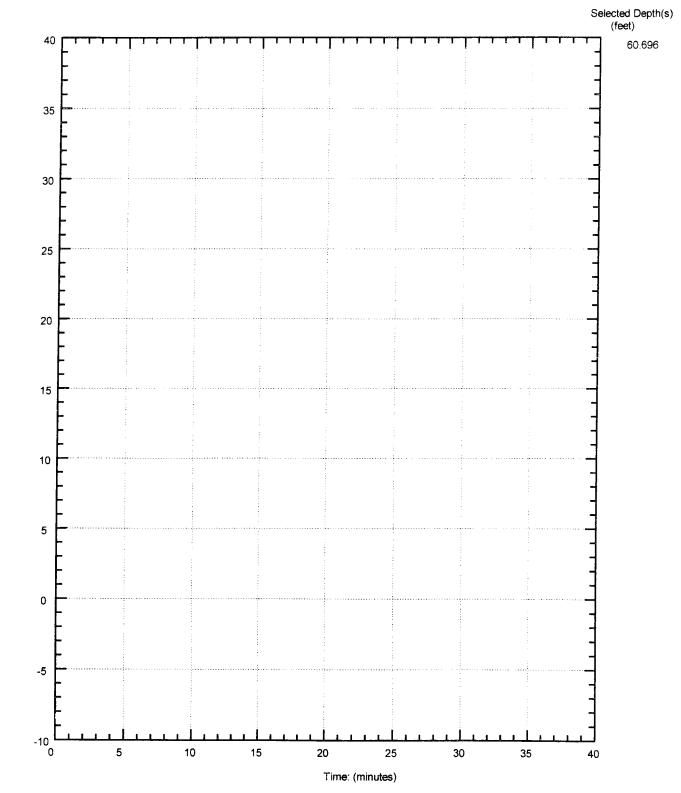
Sounding: FILG51 Cone Used: 4CH CPT Date/Time: 07-11-02 12:58 Location: P111-09 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 9.196 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

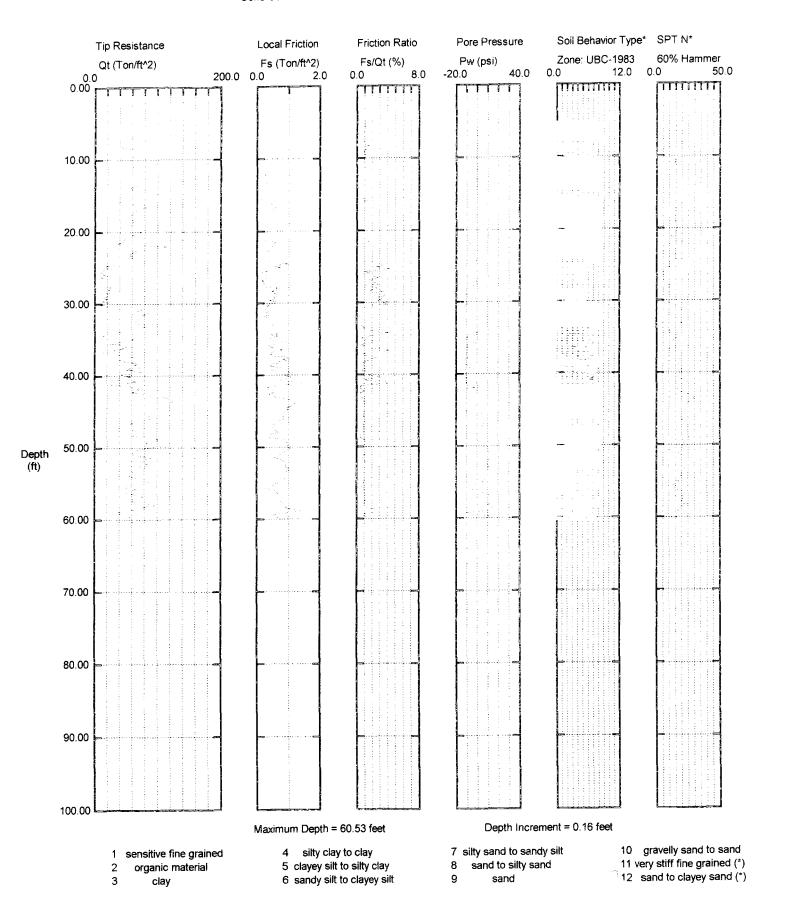
Sounding: FILG51 Cone Used: 4CH CPT Date/Time: 07-11-02 12:58 Location: P111-09 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 17.517 psi Hydrostatic Pressure

Pressure (psi)

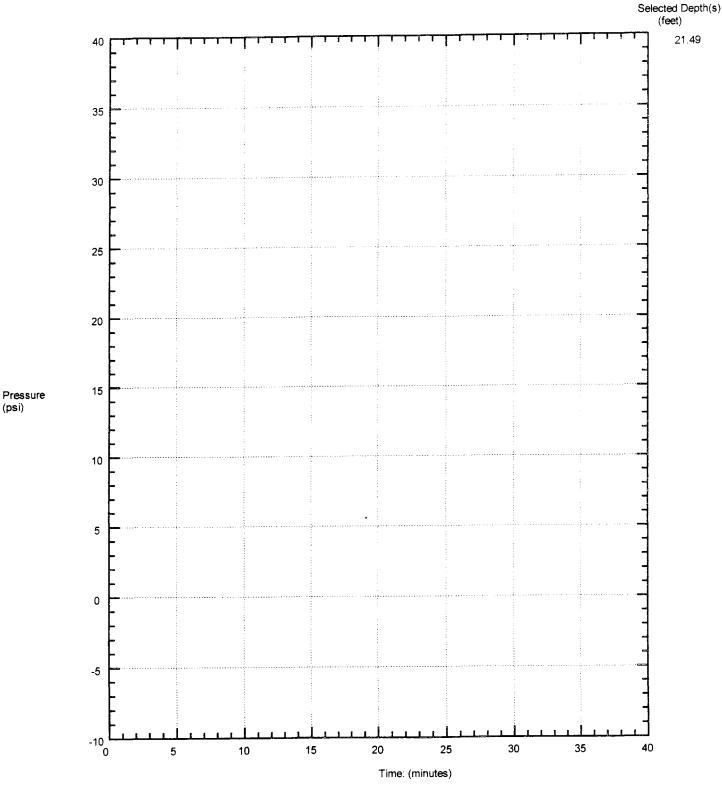
Sounding: FILG48 Cone Used: 4CH CPT Date/Time: 07-11-02 08:17 Location: P111-10 NW TERM Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH Sounding: FILG48

Cone Used: 4CH

CPT Date/Time: 07-11-02 08:17 Location: P111-10 NW TERM Job Number: LANDAU/231009.31



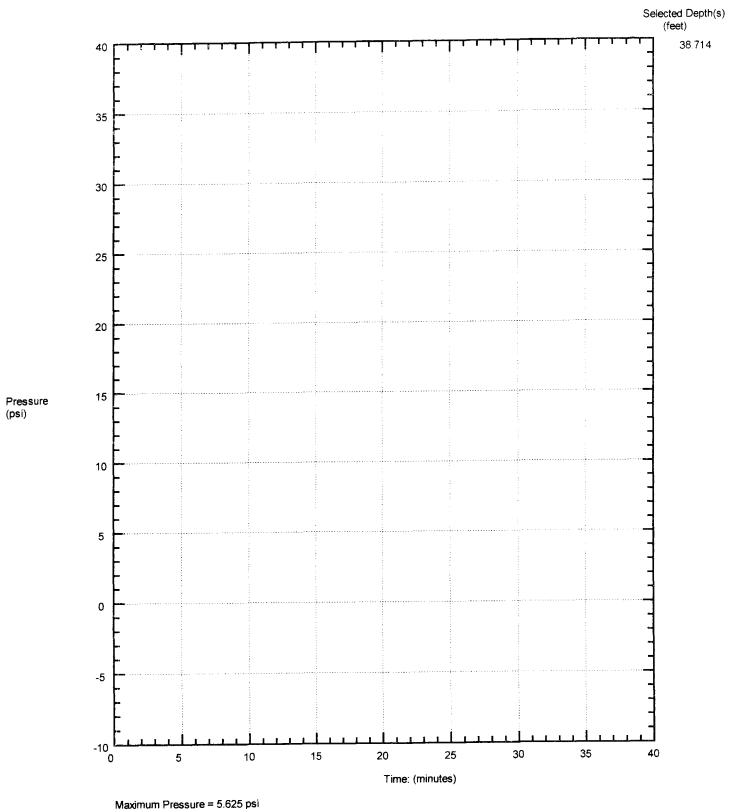
Maximum Pressure = -0.427 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

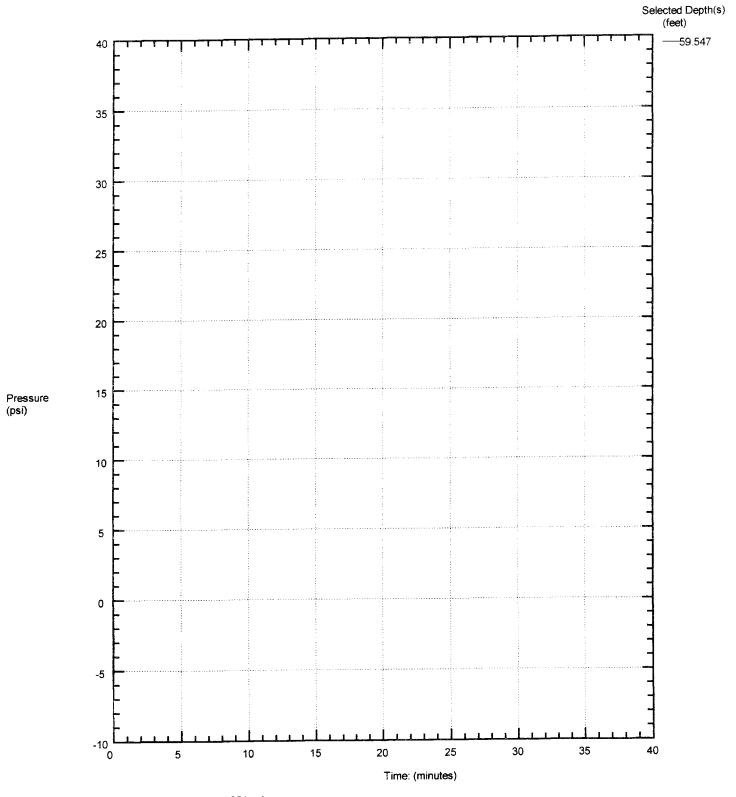
Sounding: FILG48 Cone Used: 4CH

Hydrostatic Pressure

CPT Date/Time: 07-11-02 08:17 Location: P111-10 NW TERM Job Number: LANDAU/231009.31

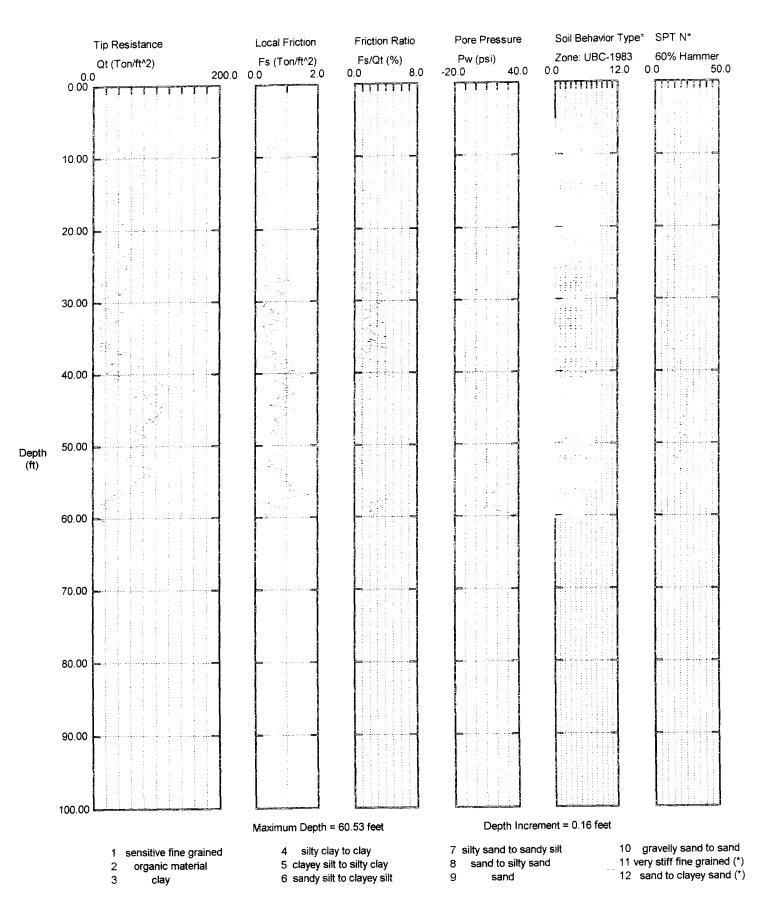


Operator KDV/SVAN/GEOTECH Sounding: FILG48 Cone Used: 4CH CPT Date/Time: 07-11-02 08:17 Location: P111-10 NW TERM Job Number: LANDAU/231009.31



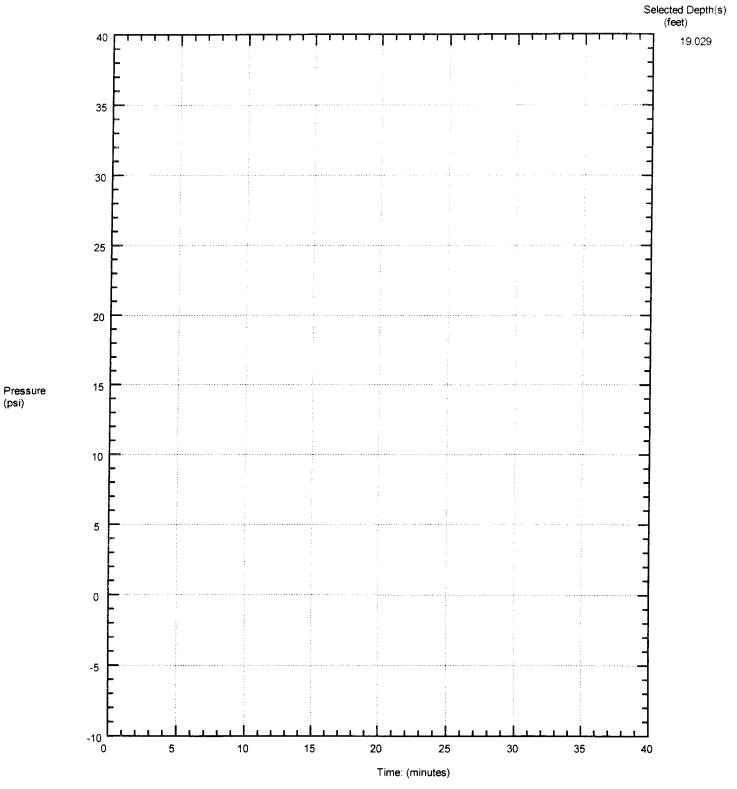
Maximum Pressure = 14.954 psi Hydrostatic Pressure

Sounding: FILG47 Cone Used: 4CH CPT Date/Time: 07-11-02 06:20 Location: P111-11 NW TERM Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

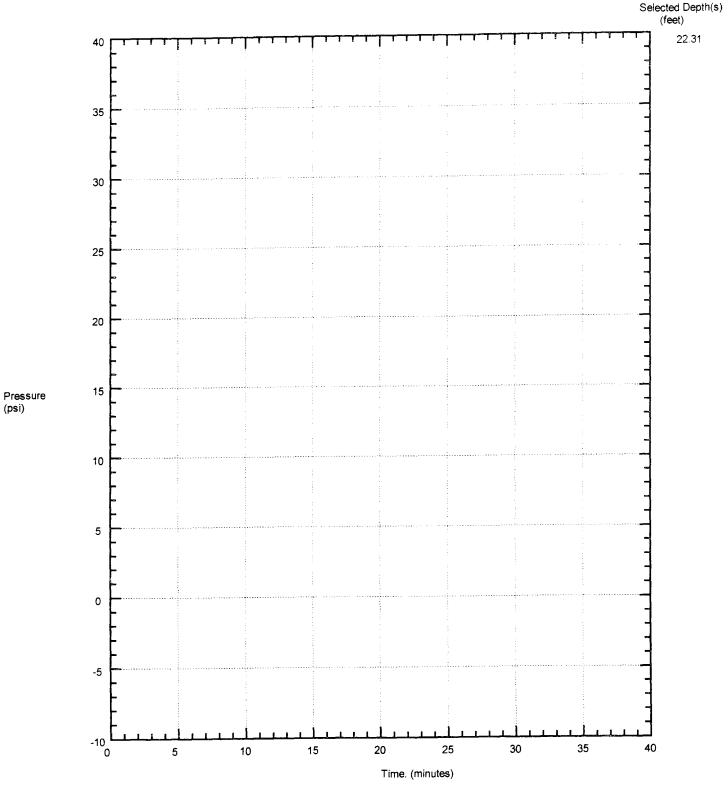
Sounding: FILG47 Cone Used: 4CH CPT Date/Time: 07-11-02 06:20 Location: P111-11 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 0.722 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

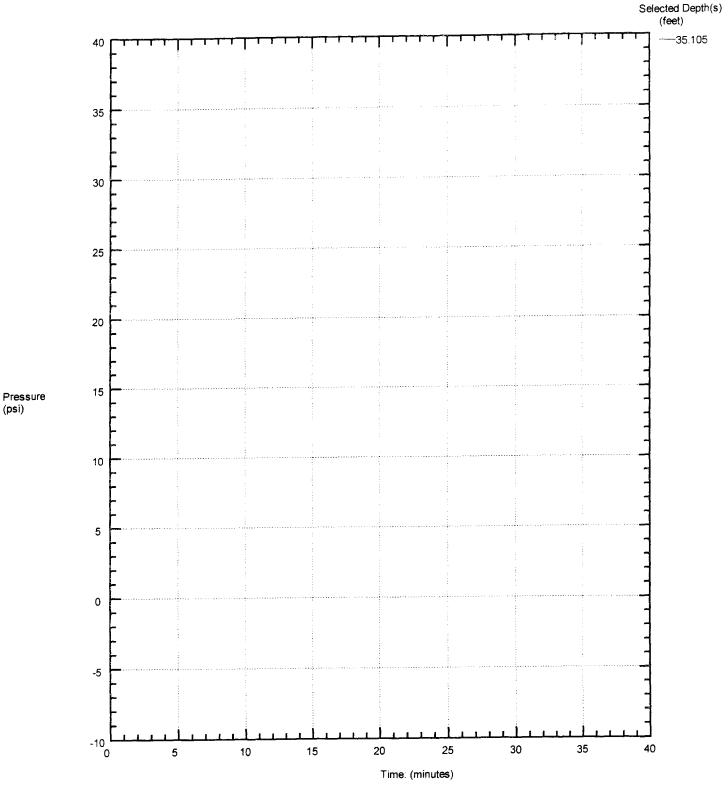
Sounding: FILG47 Cone Used: 4CH CPT Date/Time: 07-11-02 06:20 Location: P111-11 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 1.506 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

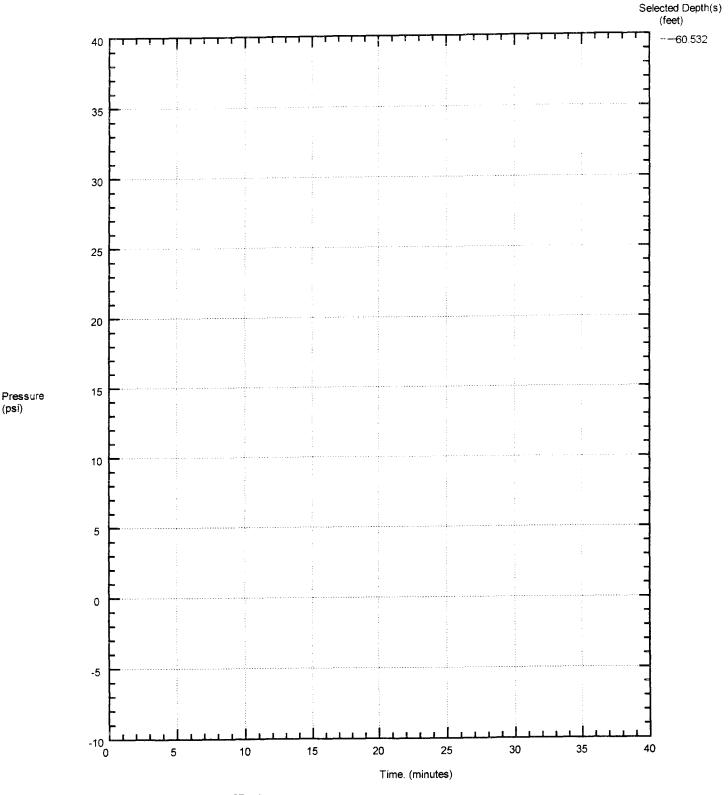
Sounding: FILG47 Cone Used: 4CH CPT Date/Time: 07-11-02 06:20 Location: P111-11 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 5.717 psi Hydrostatic Pressure

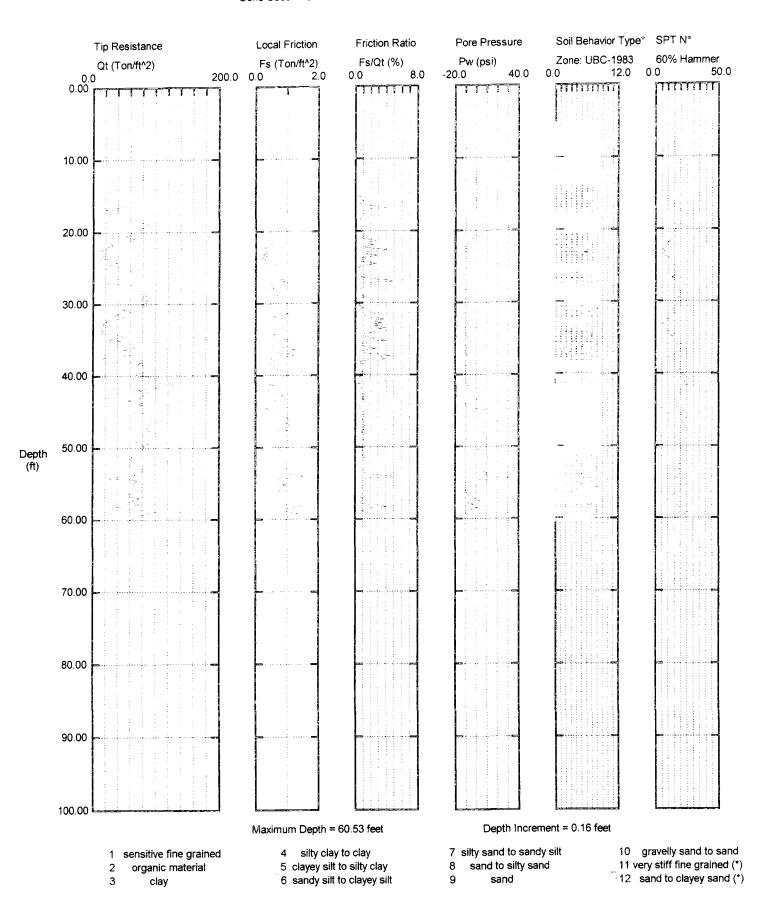
Operator KDV/SVAN/GEOTECH

Sounding: FILG47 Cone Used: 4CH CPT Date/Time: 07-11-02 06:20 Location: P111-11 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 62.897 psi Hydrostatic Pressure

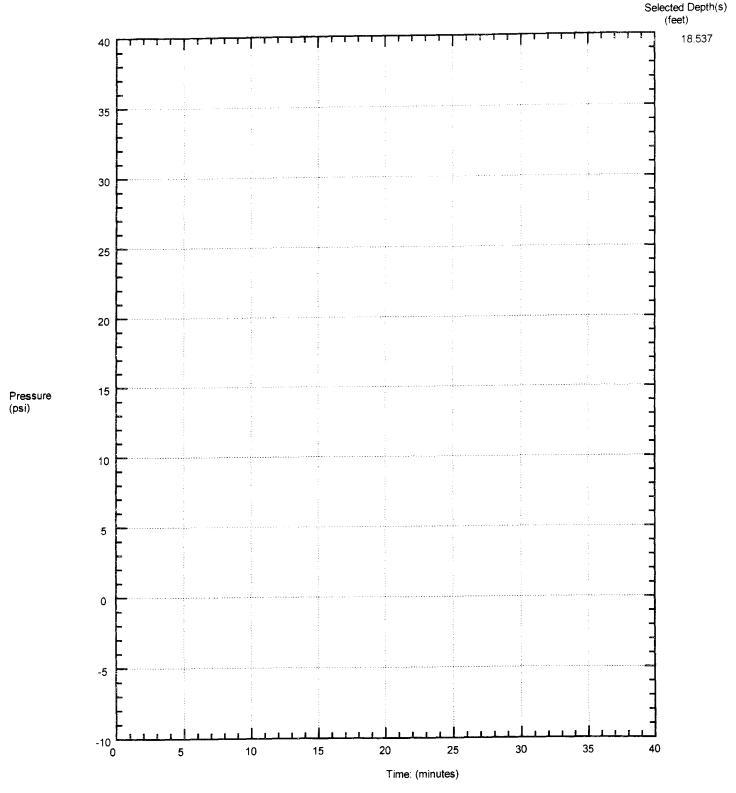
Sounding: FILG49 Cone Used: 4CH CPT Date/Time: 07-11-02 10:23 Location: P111-12 NW TERM Job Number: LANDAU/231009.31



## LANDAU/P111-12/NW TERMINAL

Operator KDV/SVAN/GEOTECH

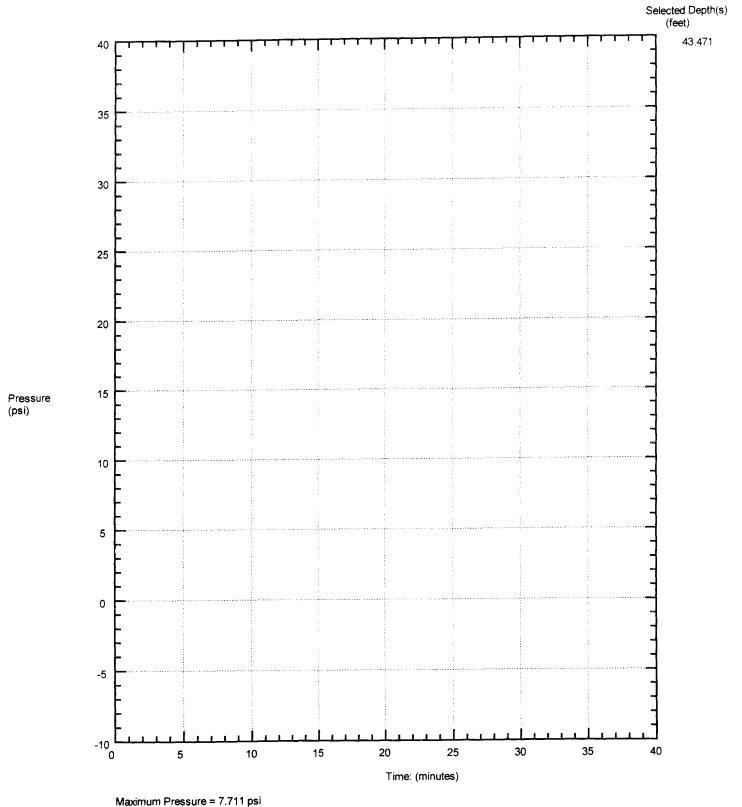
Sounding: FILG49 Cone Used: 4CH CPT Date/Time: 07-11-02 10:23 Location: P111-12 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = -0.732 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

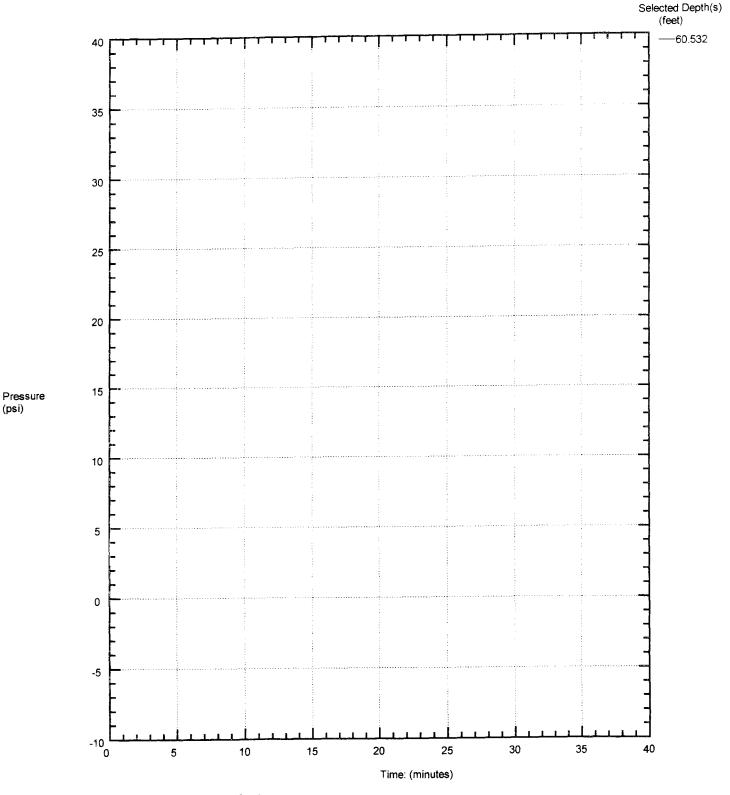
Sounding: FILG49 Cone Used: 4CH CPT Date/Time: 07-11-02 10:23 Location: P111-12 NW TERM Job Number: LANDAU/231009.31



Hydrostatic Pressure

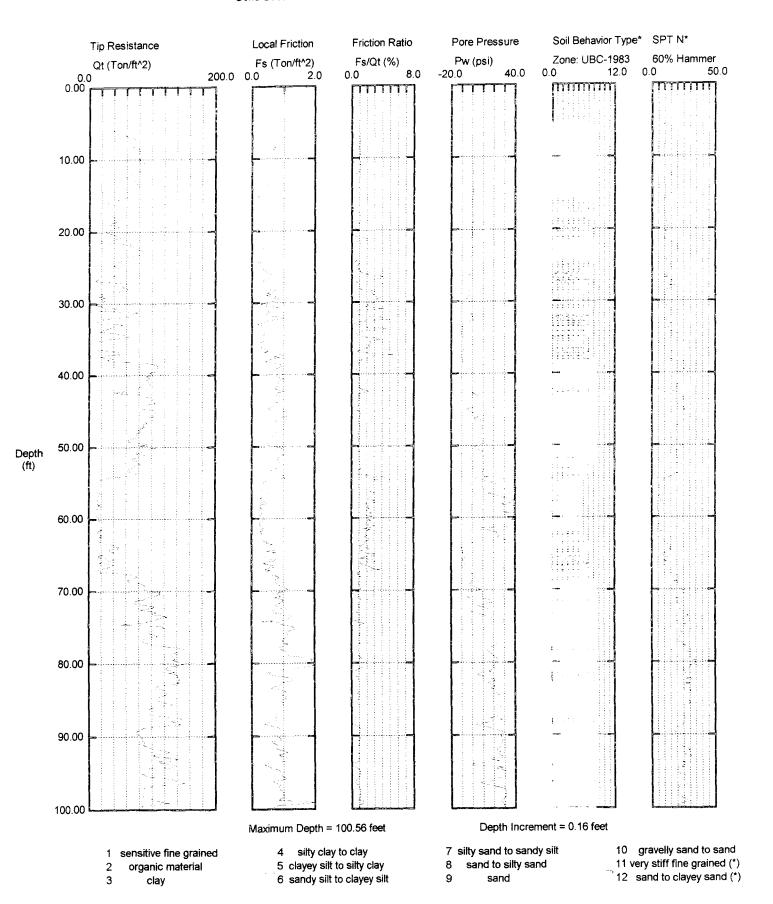
Operator KDV/SVAN/GEOTECH

Sounding: FILG49 Cone Used: 4CH CPT Date/Time: 07-11-02 10:23 Location: P111-12 NW TERM Job Number: LANDAU/231009.31



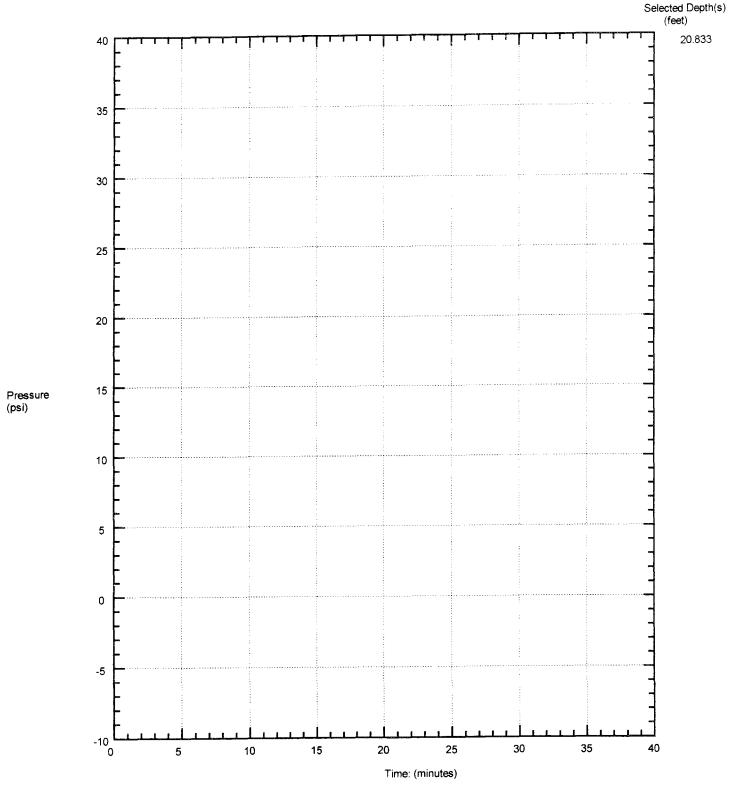
Maximum Pressure = 15.523 psi Hydrostatic Pressure

Sounding: FILG44 Cone Used: 4CH CPT Date/Time: 07-10-02 09:06 Location: P111-13 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

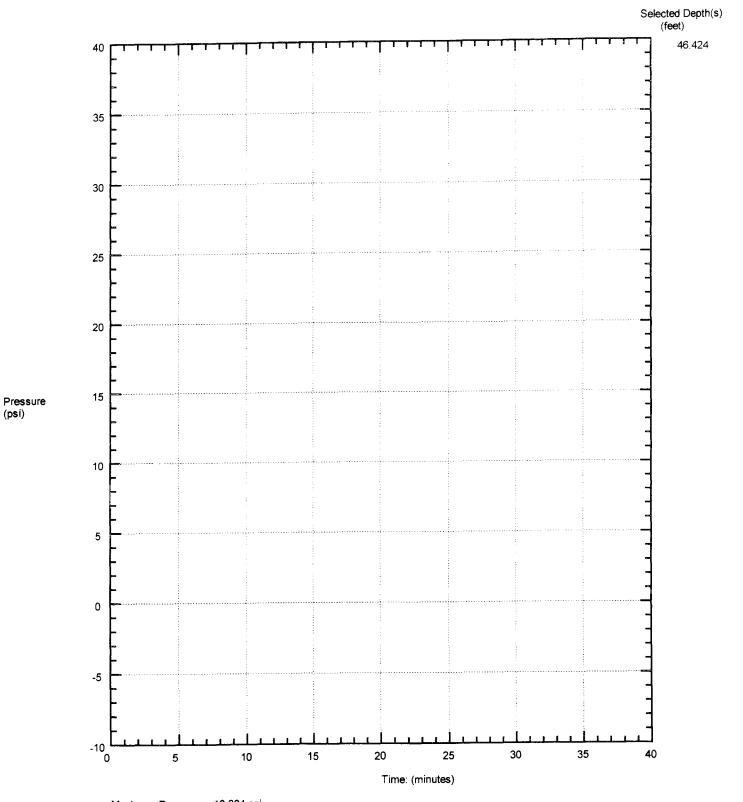
Sounding: FILG44 Cone Used: 4CH CPT Date/Time: 07-10-02 09:06 Location: P111-13 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 1.007 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

Sounding: FILG44 Cone Used: 4CH CPT Date/Time: 07-10-02 09:06 Location: P111-13 NW TERMI Job Number: LANDAU/231009.31

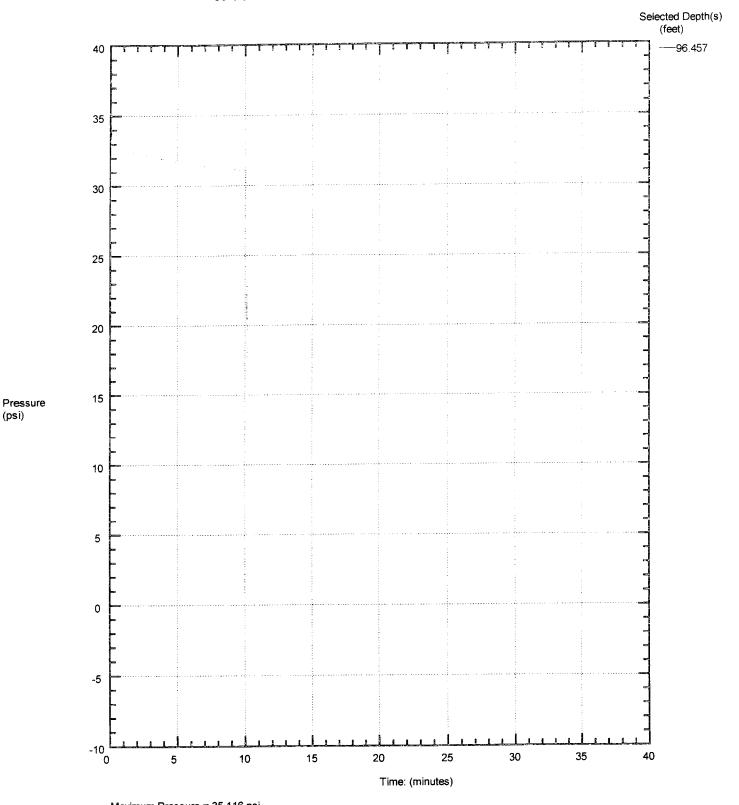


Maximum Pressure = 10.284 psi Hydrostatic Pressure

#### LANDAU/P111-13/NW TERMINAL

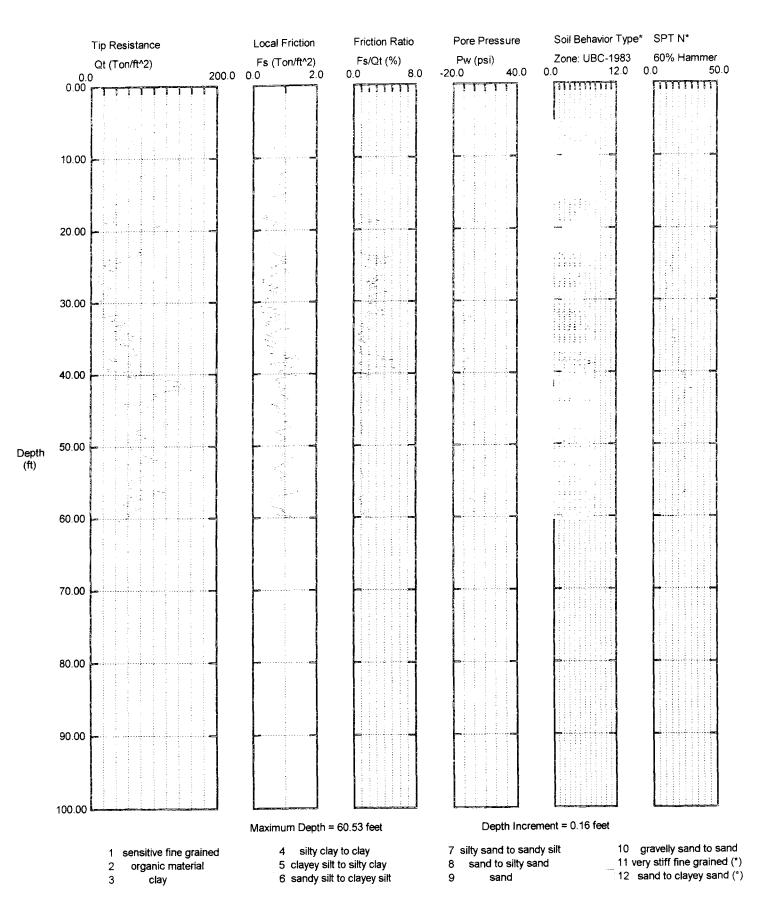
Operator KDV/SVAN/GEOTECH

Sounding: FILG44 Cone Used: 4CH CPT Date/Time: 07-10-02 09:06 Location: P111-13 NW TERMI Job Number: LANDAU/231009.31



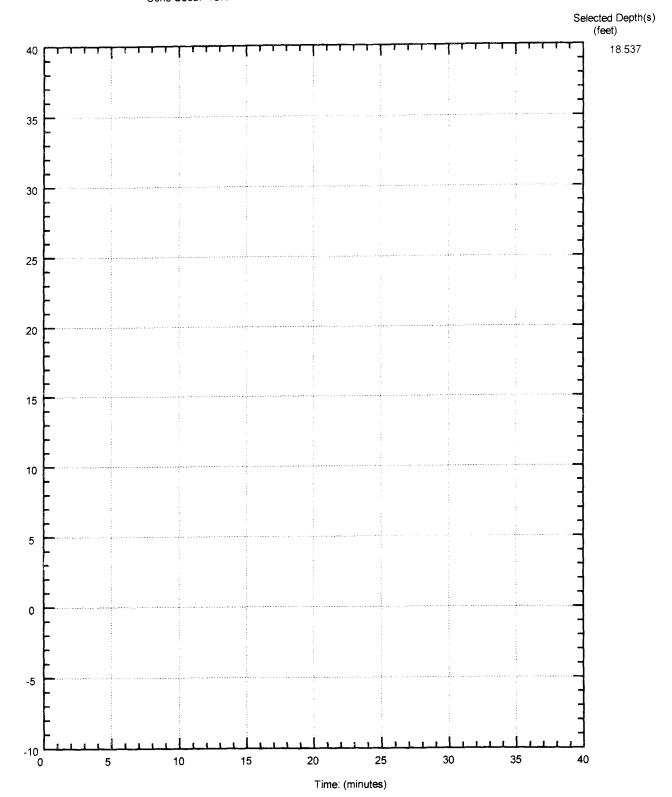
Maximum Pressure = 35.116 psi Hydrostatic Pressure

Sounding: FILG46 Cone Used: 4CH CPT Date/Time: 07-10-02 13:39 Location: P111-14 NW TERM Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

Sounding: FILG46 Cone Used: 4CH CPT Date/Time: 07-10-02 13:39 Location: P111-14 NW TERM Job Number: LANDAU/231009.31

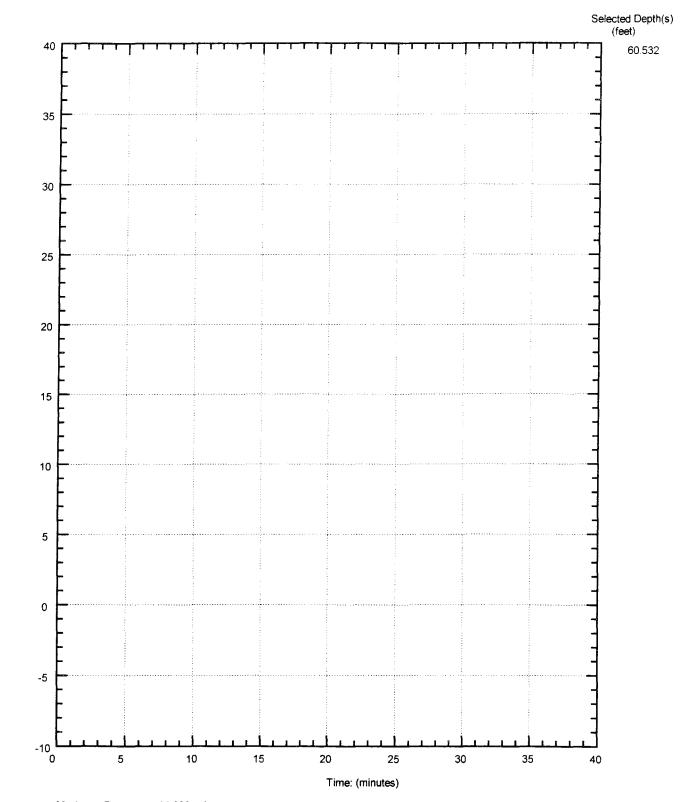


Maximum Pressure = 3.693 psi Hydrostatic Pressure

Pressure (psi)

Operator KDV/SVAN/GEOTECH

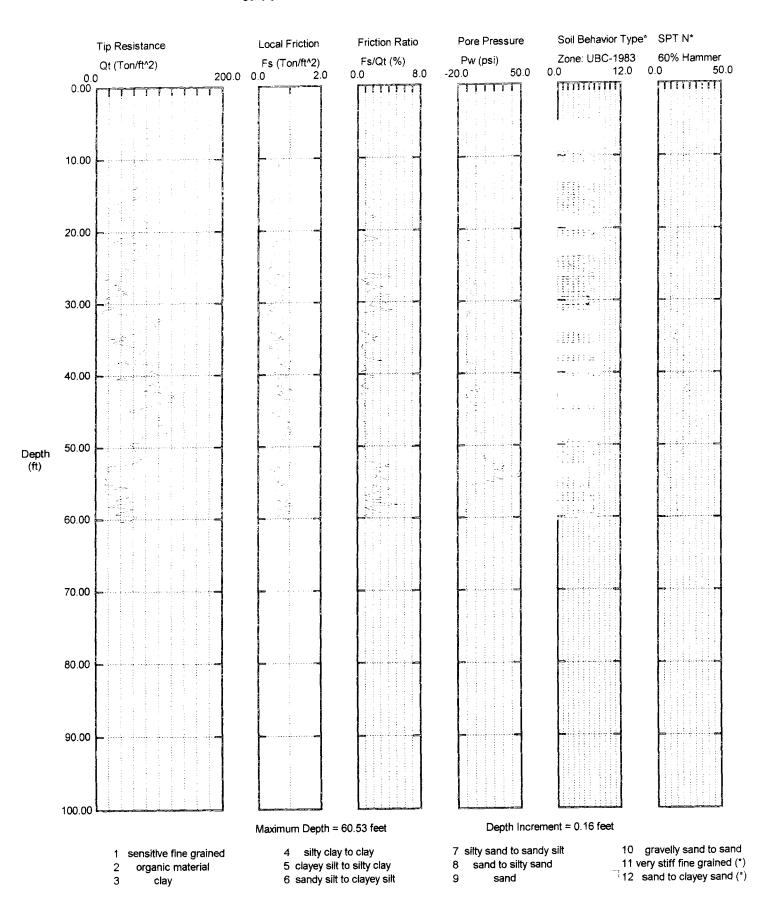
Sounding: FILG46 Cone Used: 4CH CPT Date/Time: 07-10-02 13:39 Location: P111-14 NW TERM Job Number: LANDAU/231009.31



Maximum Pressure = 14.628 psi Hydrostatic Pressure

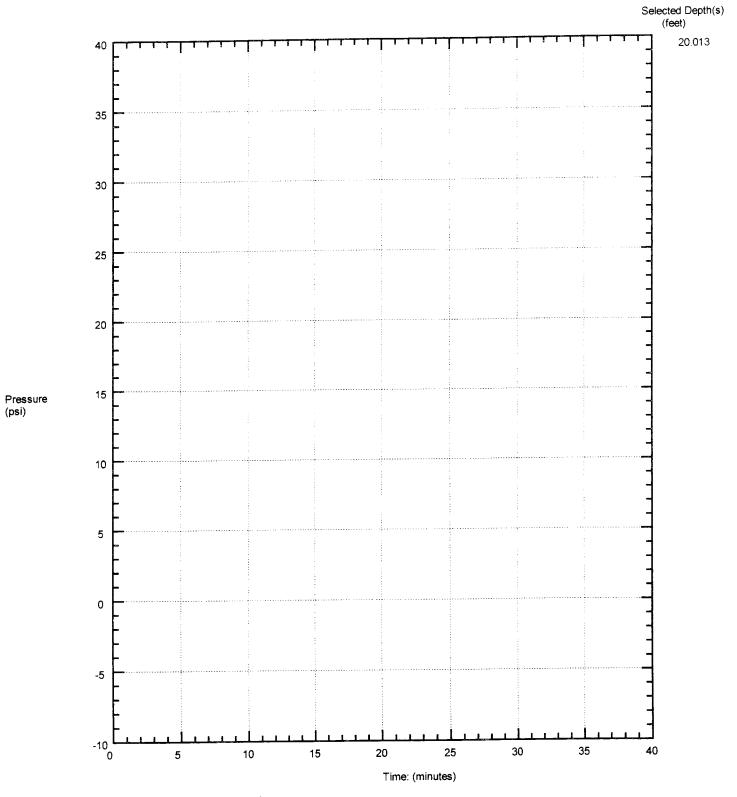
Pressure (psi)

Sounding: FILG45 Cone Used: 4CH CPT Date/Time: 07-10-02 10:55 Location: P111-15 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

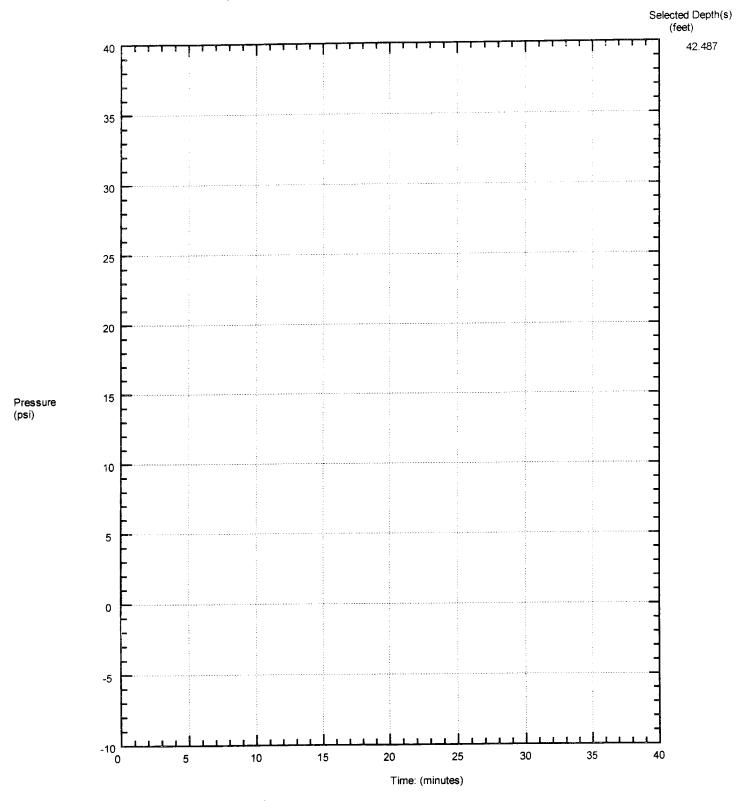
Sounding: FILG45 Cone Used: 4CH CPT Date/Time: 07-10-02 10:55 Location: P111-15 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = -1.221 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

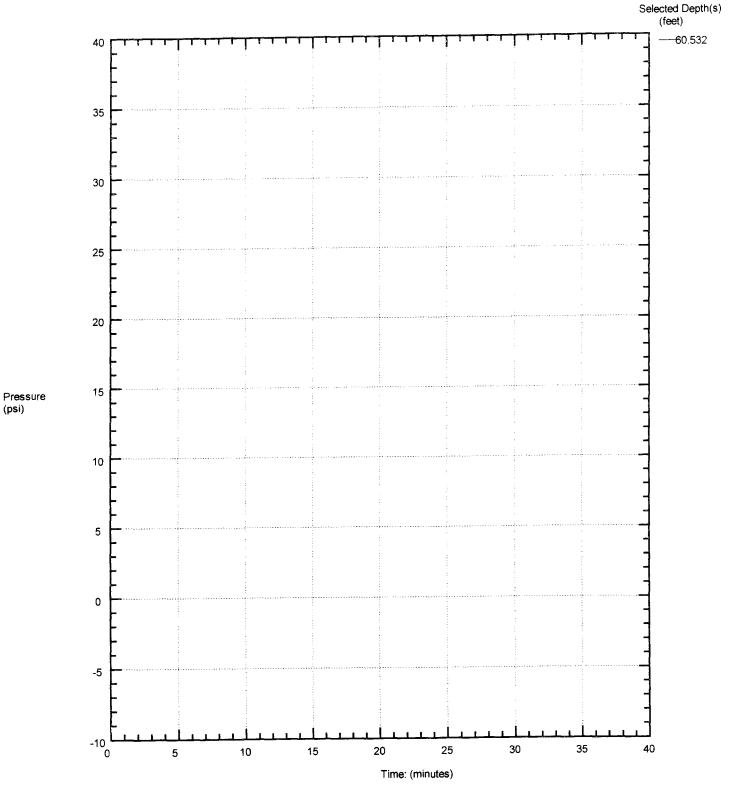
Sounding: FILG45 Cone Used: 4CH CPT Date/Time: 07-10-02 10:55 Location: P111-15 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 6.734 psi Hydrostatic Pressure

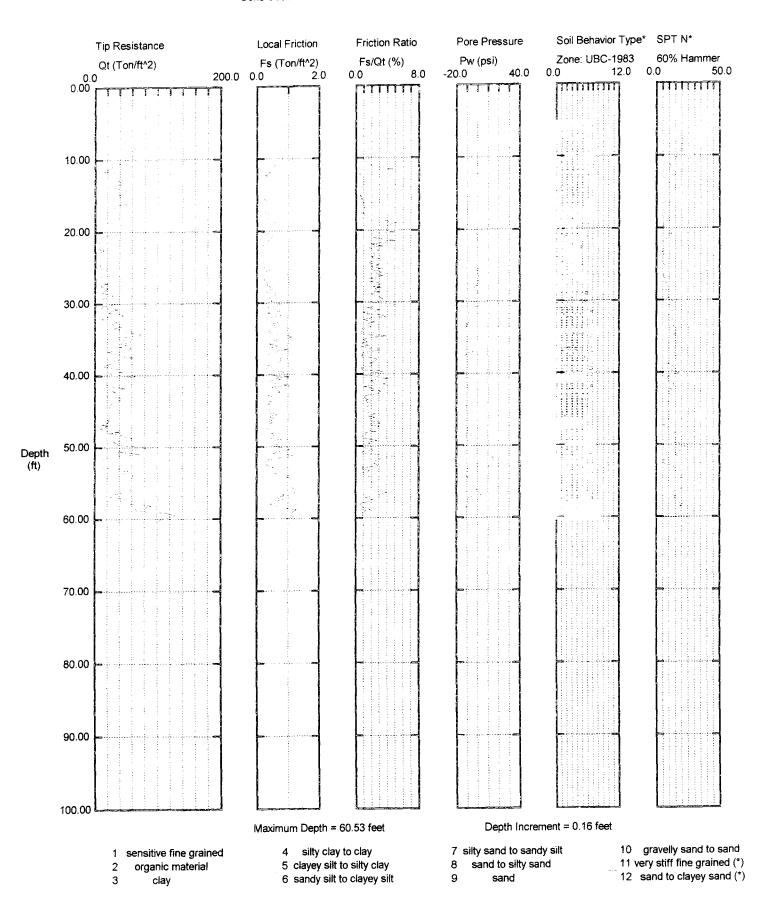
Operator KDV/SVAN/GEOTECH

Sounding: FILG45 Cone Used: 4CH CPT Date/Time: 07-10-02 10:55 Location: P111-15 NW TERMI Job Number: LANDAU/231009.31



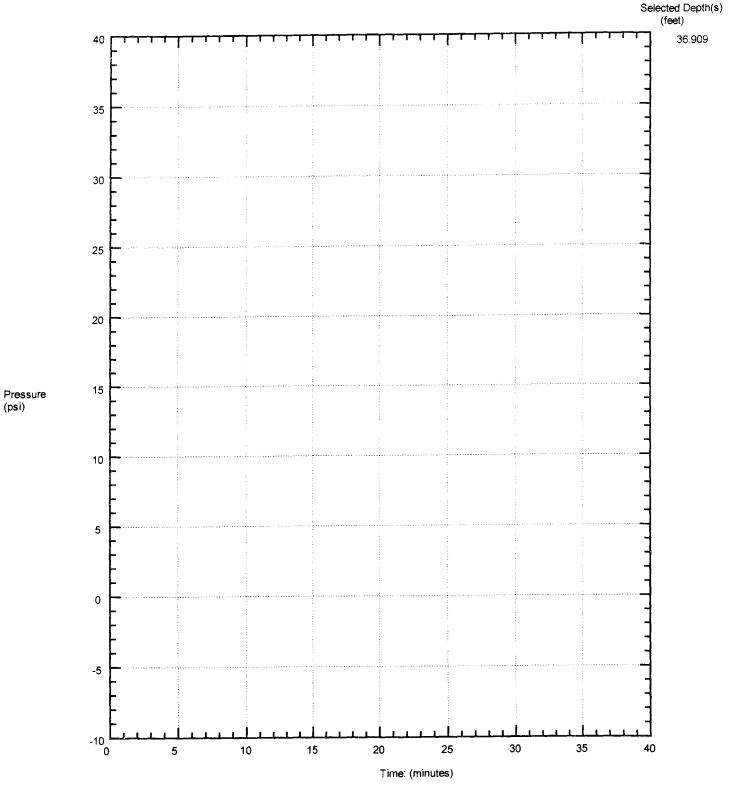
Maximum Pressure = 13.713 psi Hydrostatic Pressure

Sounding: FILG66 Cone Used: 4CH CPT Date/Time: 07-16-02 11:31 Location: P111-16 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

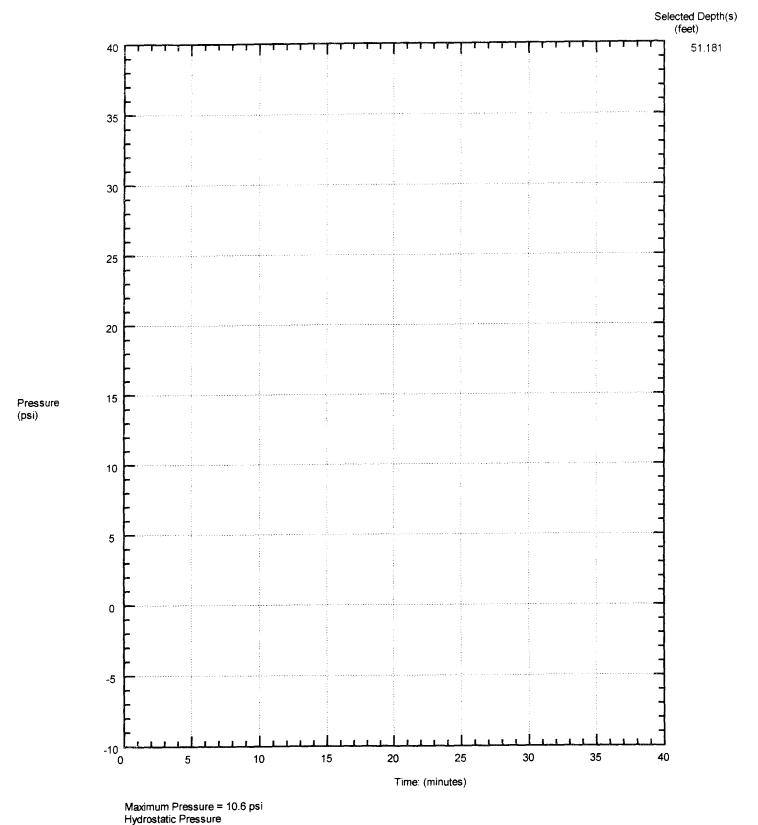
Sounding: FILG66 Cone Used: 4CH CPT Date/Time: 07-16-02 11:31 Location: P111-16 NW TERMI Job Number: LANDAU/231009 31



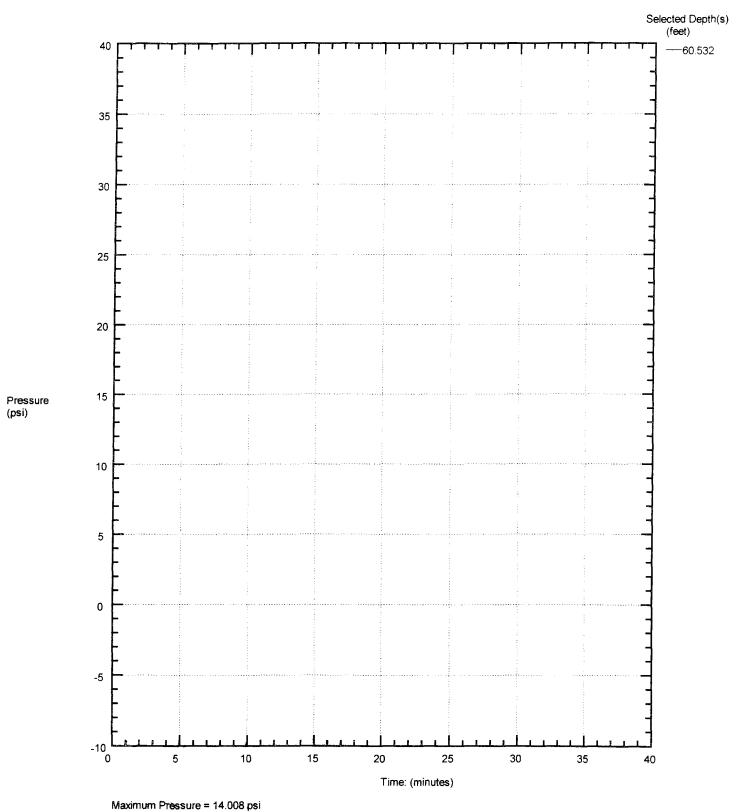
Maximum Pressure = 3.937 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

Sounding: FILG66 Cone Used: 4CH CPT Date/Time: 07-16-02 11:31 Location: P111-16 NW TERMI Job Number: LANDAU/231009.31



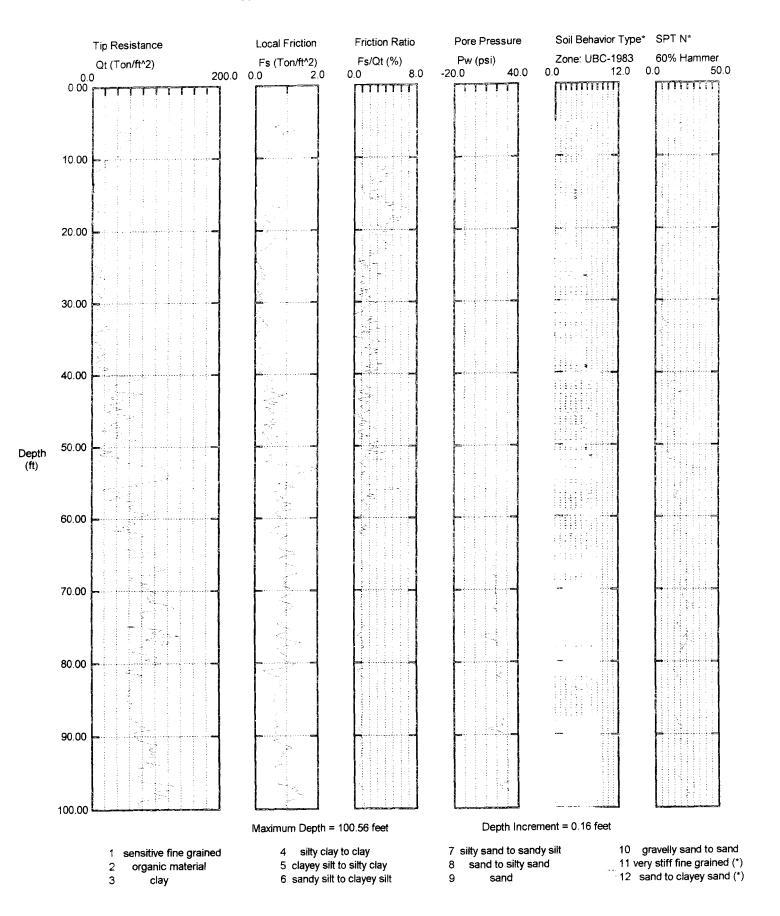
Operator KDV/SVAN/GEOTECH Sounding: FILG66 Cone Used: 4CH CPT Date/Time: 07-16-02 11:31 Location: P111-16 NW TERMI Job Number: LANDAU/231009 31



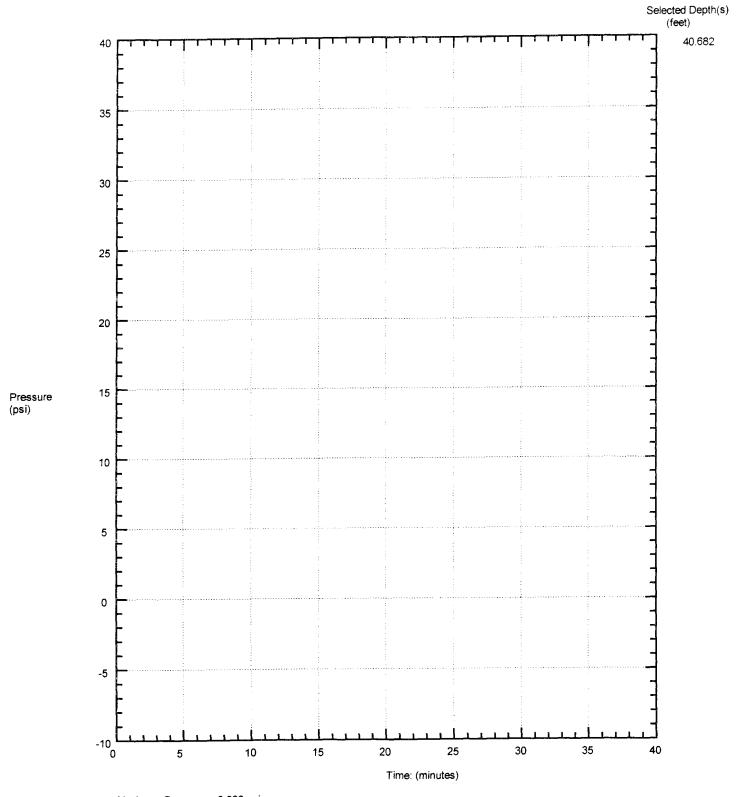
Hydrostatic Pressure

Sounding: FILG65 Cone Used: 4CH

CPT Date/Time: 07-16-02 09:44 Location: P111-17 NW TERMI Job Number: LANDAU/231009.31

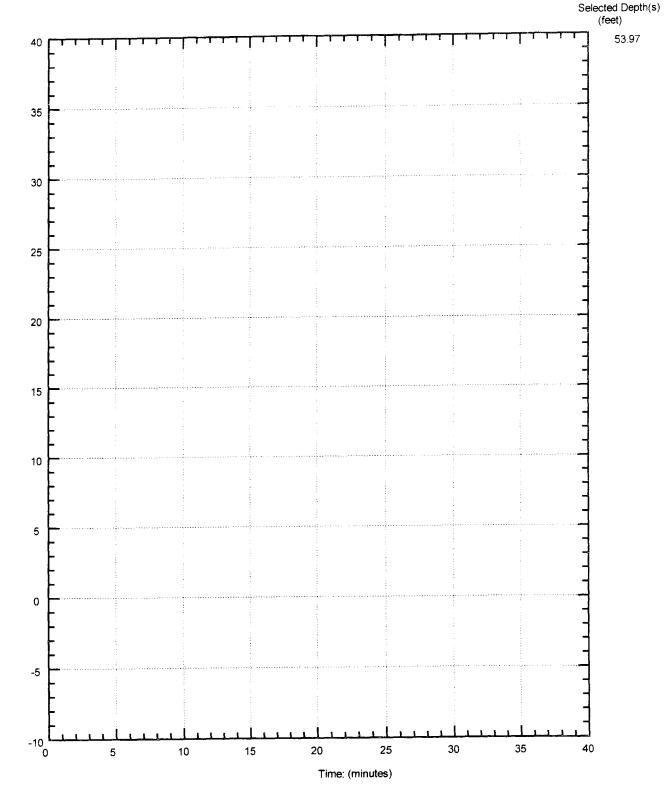


Operator KDV/SVAN/GEOTECH Sounding: FILG65 Cone Used: 4CH CPT Date/Time: 07-16-02 09:44 Location: P111-17 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 6.633 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH Sounding: FILG65 Cone Used: 4CH CPT Date/Time: 07-16-02 09:44 Location: P111-17 NW TERMI Job Number: LANDAU/231009.31

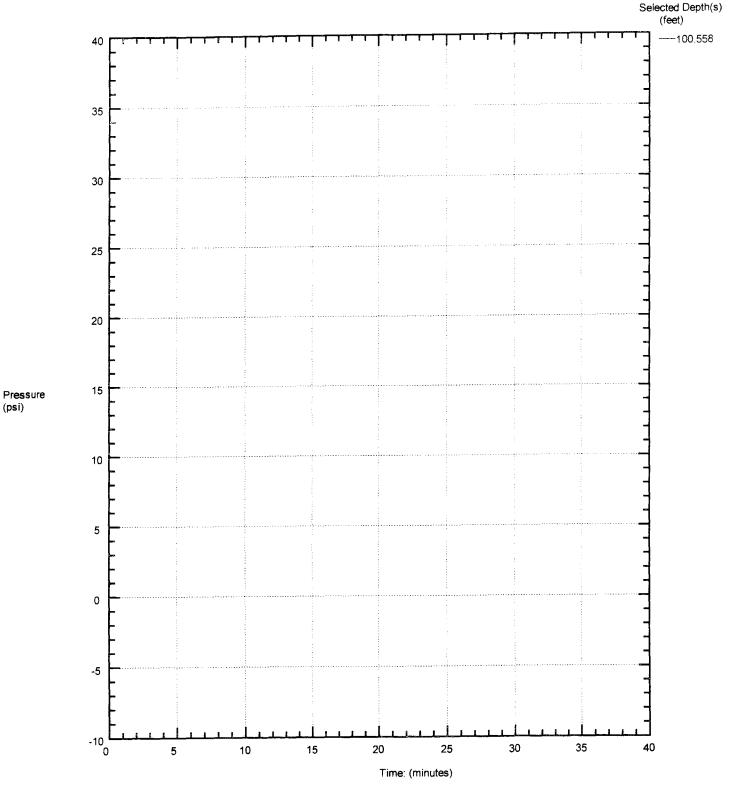


Maximum Pressure = 12.268 psi Hydrostatic Pressure

Pressure (psi)

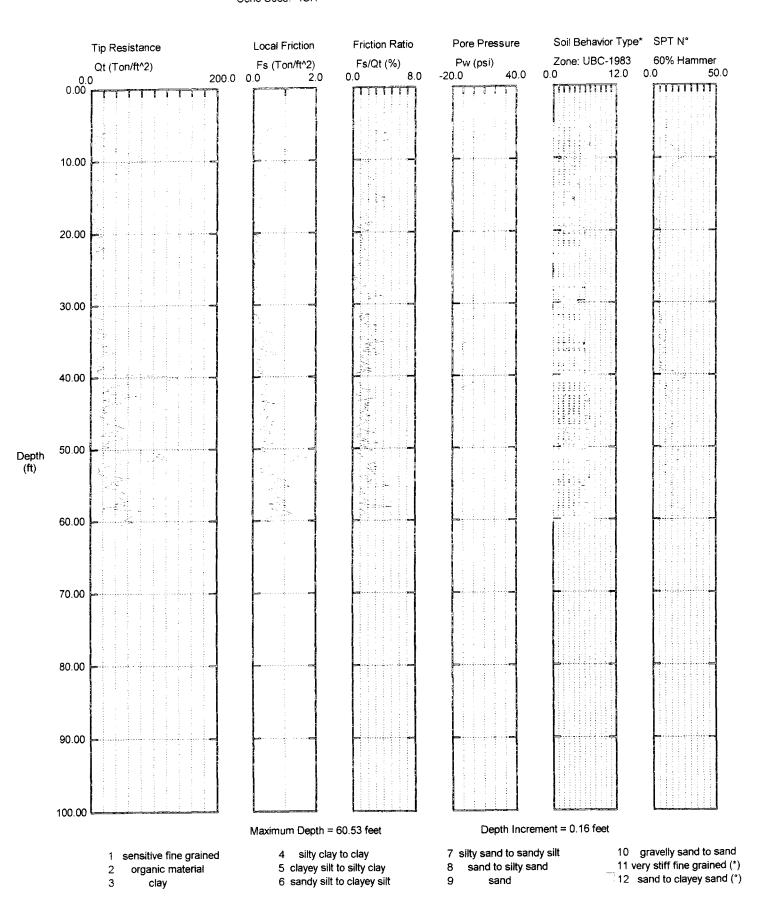
Operator KDV/SVAN/GEOTECH

Sounding: FILG65 Cone Used: 4CH CPT Date/Time: 07-16-02 09:44 Location: P111-17 NW TERMI Job Number: LANDAU/231009.31



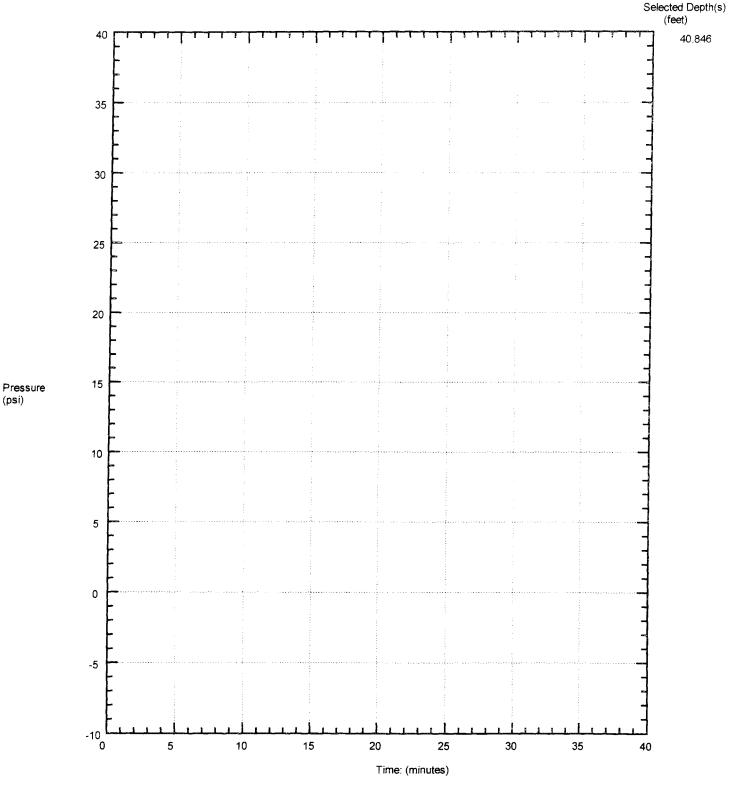
Maximum Pressure = 34.058 psi Hydrostatic Pressure

Sounding: FILG68 Cone Used: 4CH CPT Date/Time: 07-16-02 13:40 Location: P111-18 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

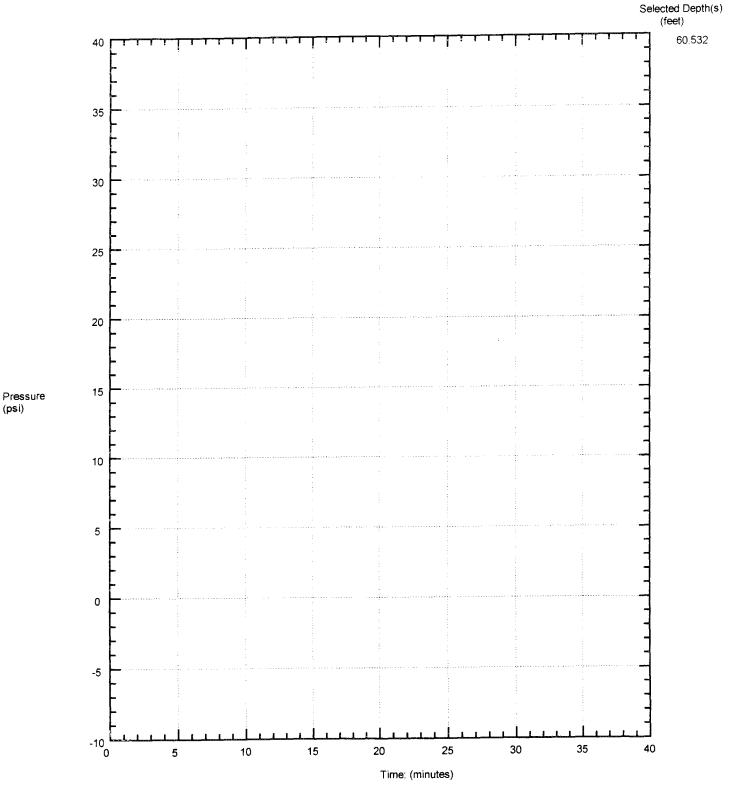
Sounding: FILG68 Cone Used: 4CH CPT Date/Time: 07-16-02 13:40 Location: P111-18 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 6.134 psi Hydrostatic Pressure

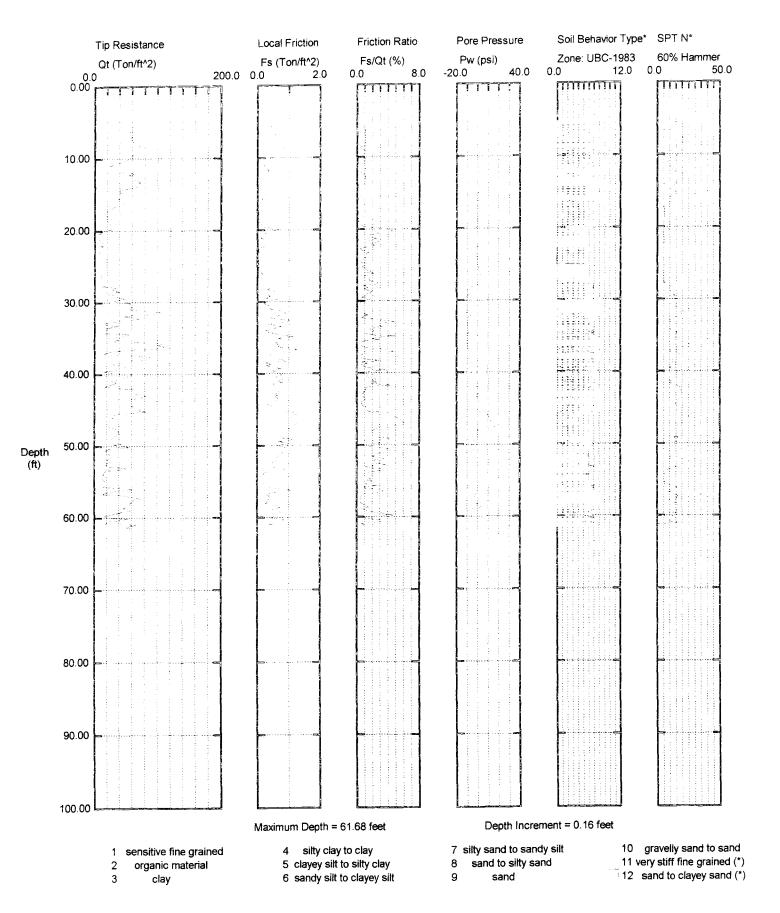
Operator KDV/SVAN/GEOTECH

Sounding: FILG68 Cone Used: 4CH CPT Date/Time: 07-16-02 13:40 Location: P111-18 NW TERMI Job Number: LANDAU/231009.31



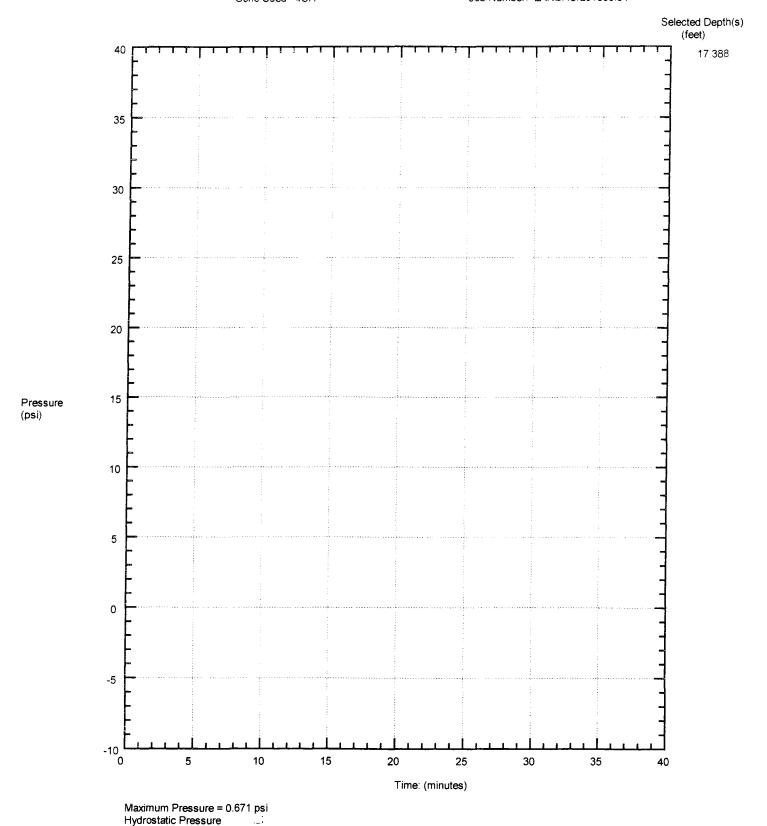
Maximum Pressure = 13.947 psi Hydrostatic Pressure

Sounding: FILG40 Cone Used: 4CH CPT Date/Time: 07-09-02 12:54 Location: P111-19 NW TERMI Job Number: LANDAU/231009.31



Operator KDV/SVAN/GEOTECH

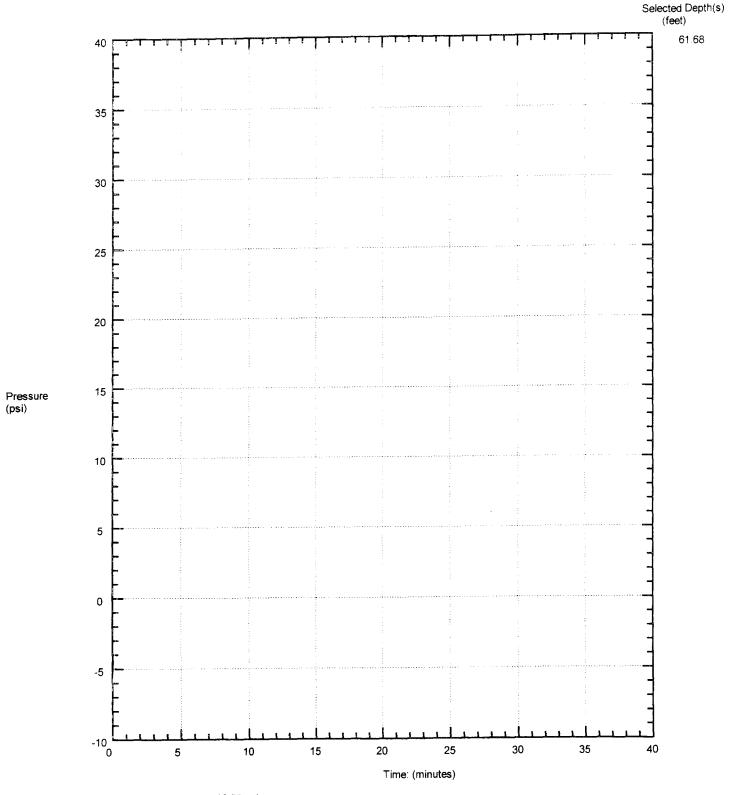
Sounding: FILG40 Cone Used: 4CH CPT Date/Time: 07-09-02 12:54 Location: P111-19 NW TERMI Job Number: LANDAU/231009.31



#### LANDAU/P111-19/NW TERMINAL

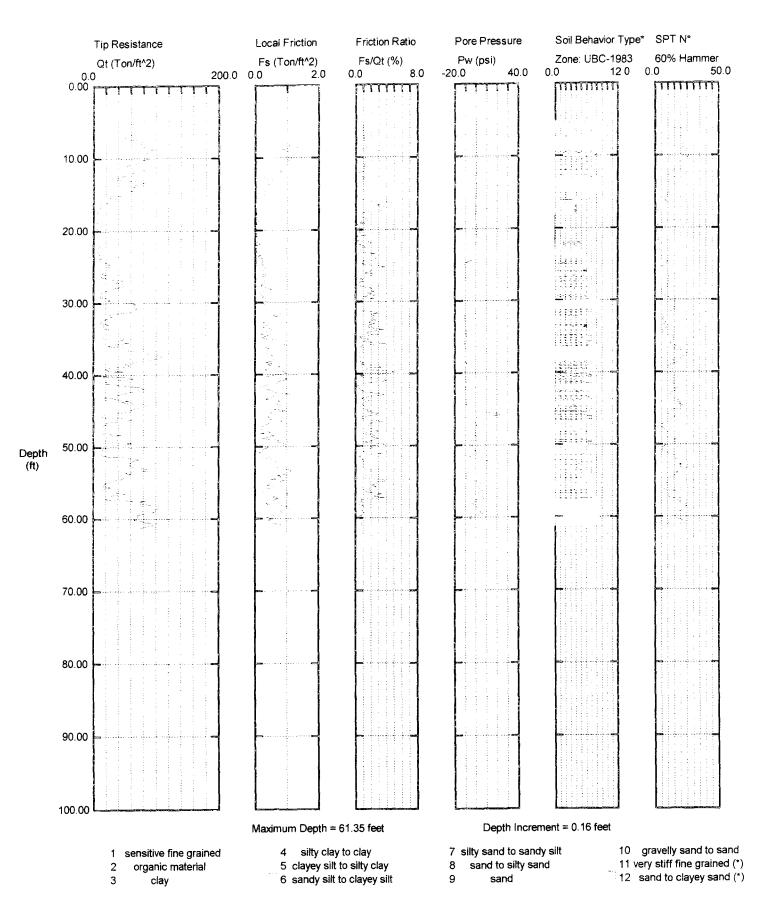
Operator KDV/SVAN/GEOTECH

Sounding: FILG40 Cone Used: 4CH CPT Date/Time: 07-09-02 12:54 Location: P111-19 NW TERMi Job Number: LANDAU/231009.31



Maximum Pressure = 16.52 psi Hydrostatic Pressure -

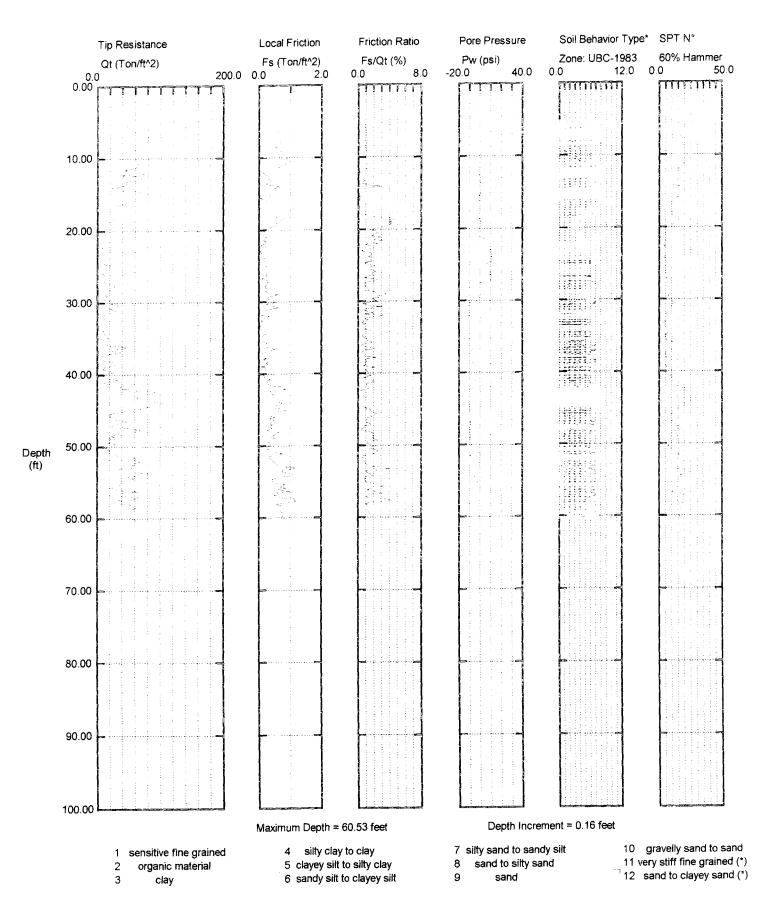
Sounding: FILG39 Cone Used: 4CH CPT Date/Time: 07-09-02 11:06 Location: P111-20 NW TERMI Job Number: LANDAU/231009.31



Sounding: FILG38 Cone Used: 4CH CPT Date/Time: 07-09-02 09:29

Location: P111-21

Job Number: LANDAU/231009.31

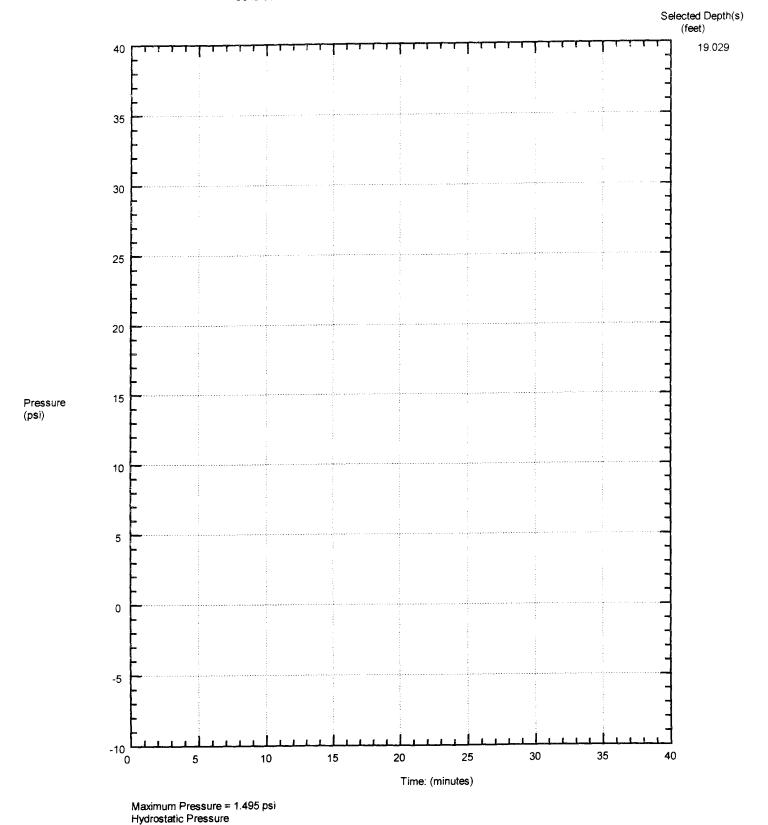


Operator KDV/SVAN/GEOTECH

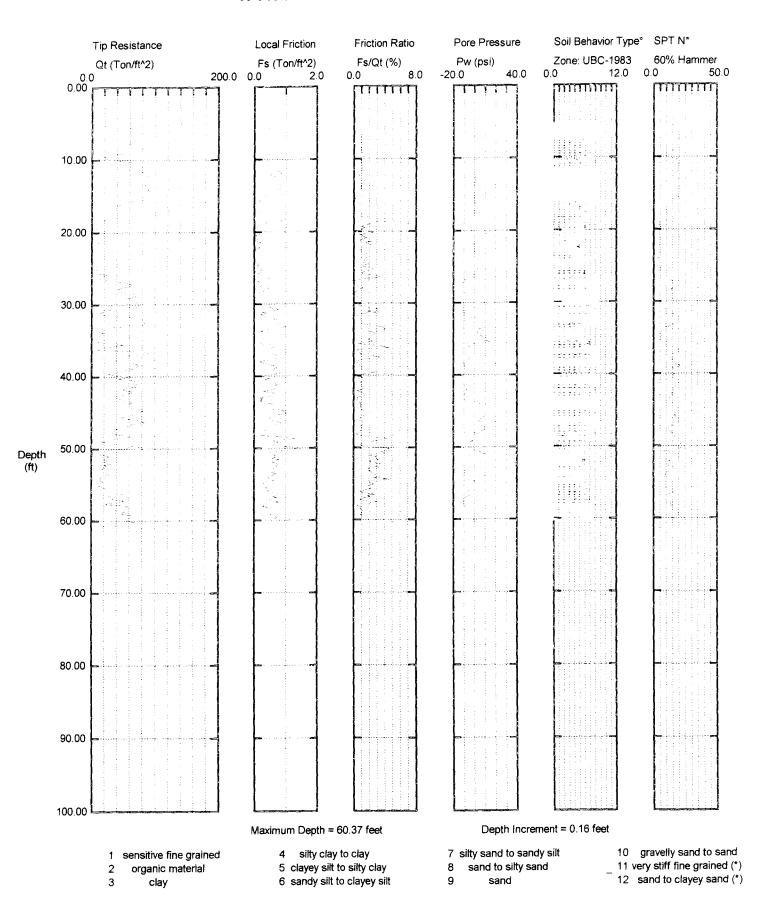
Sounding: FILG38 Cone Used: 4CH CPT Date/Time: 07-09-02 09:29

Location: P111-21

Job Number: LANDAU/231009.31

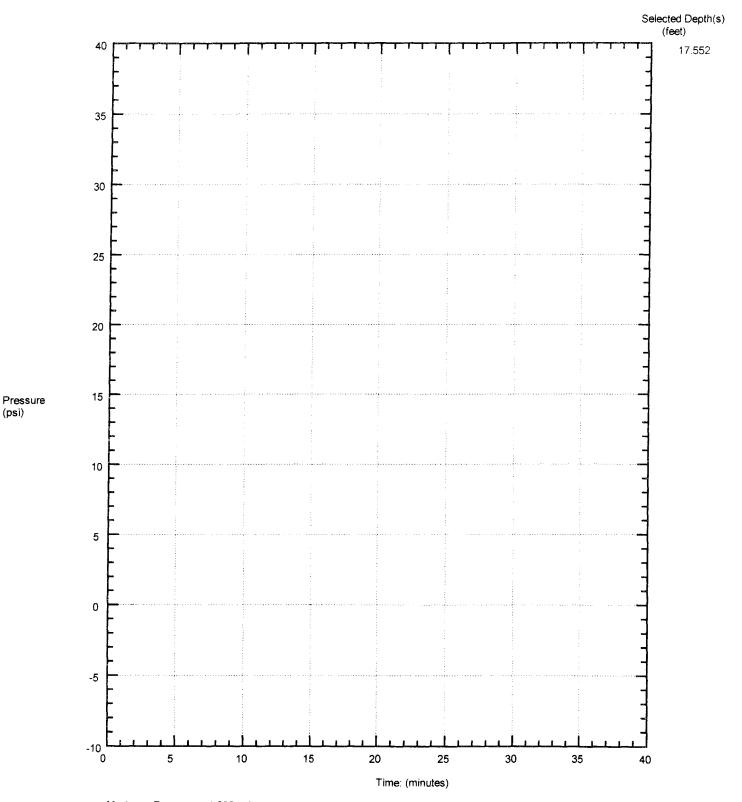


Sounding: FILG63 Cone Used: 4CH



Operator KDV/SVAN/GEOTECH Sounding: FILG63 Cone Used: 4CH

CPT Date/Time: 07-16-02 06:52 Location: P111-22 NW TERMI Job Number: LANDAU/231009.31



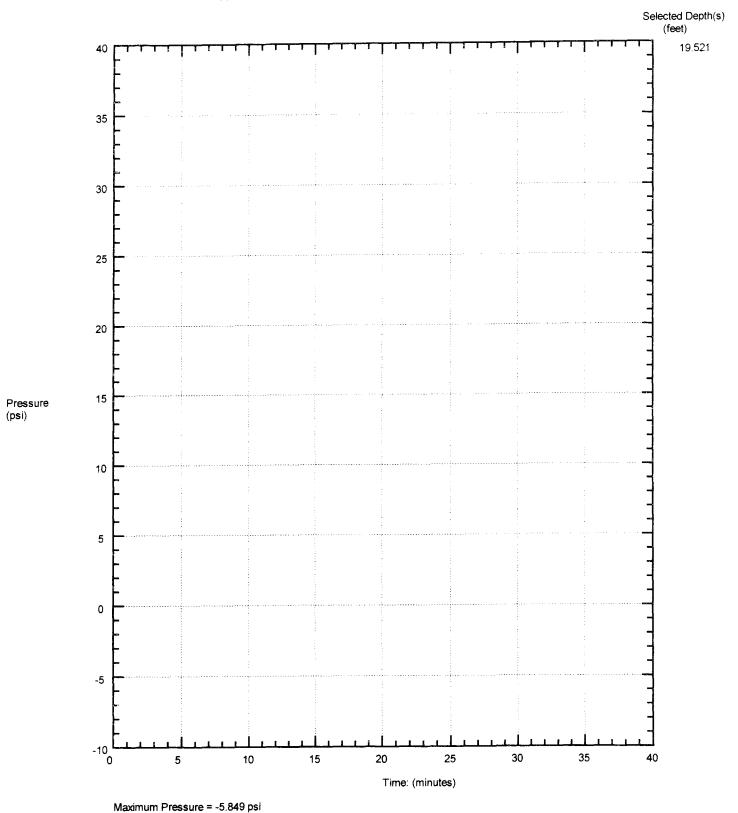
Maximum Pressure = 1.099 psi Hydrostatic Pressure

(psi)

Operator KDV/SVAN/GEOTECH Sounding: FILG63

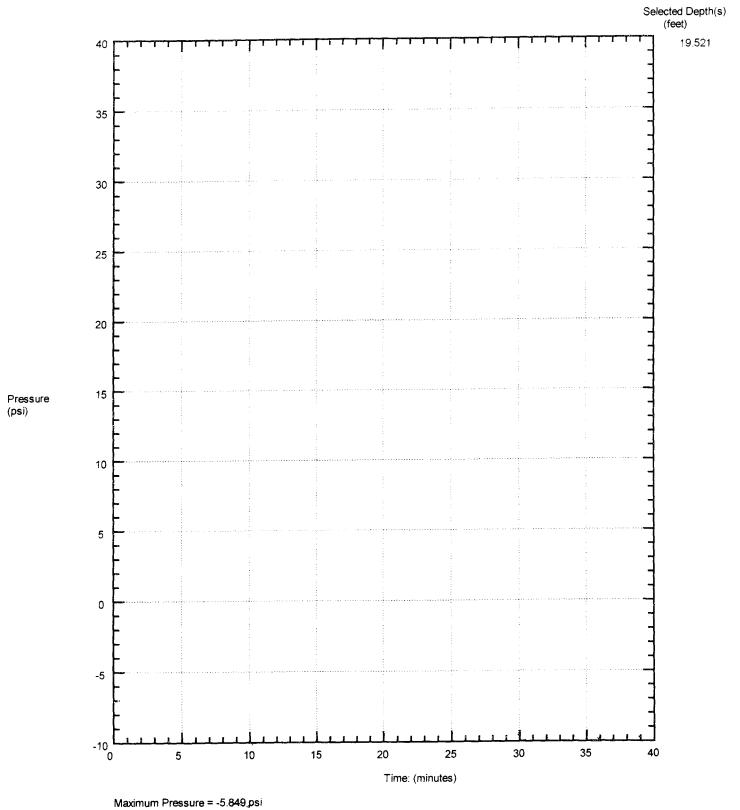
Cone Used: 4CH

Hydrostatic Pressure



Operator KDV/SVAN/GEOTECH

Sounding: FILG63 Cone Used: 4CH CPT Date/Time: 07-16-02 06:52 Location: P111-22 NW TERMI Job Number: LANDAU/231009.31

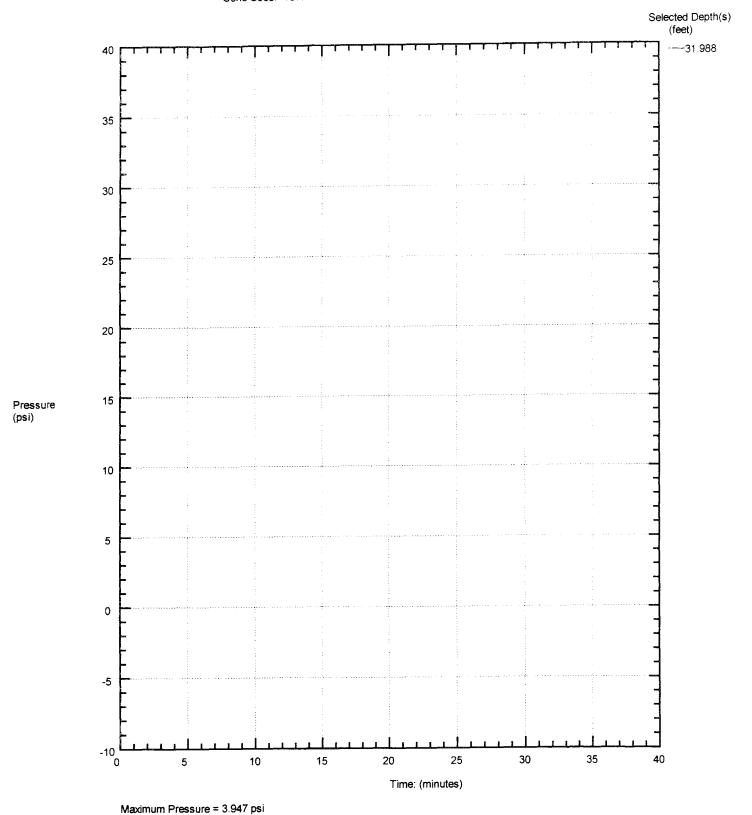


Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH

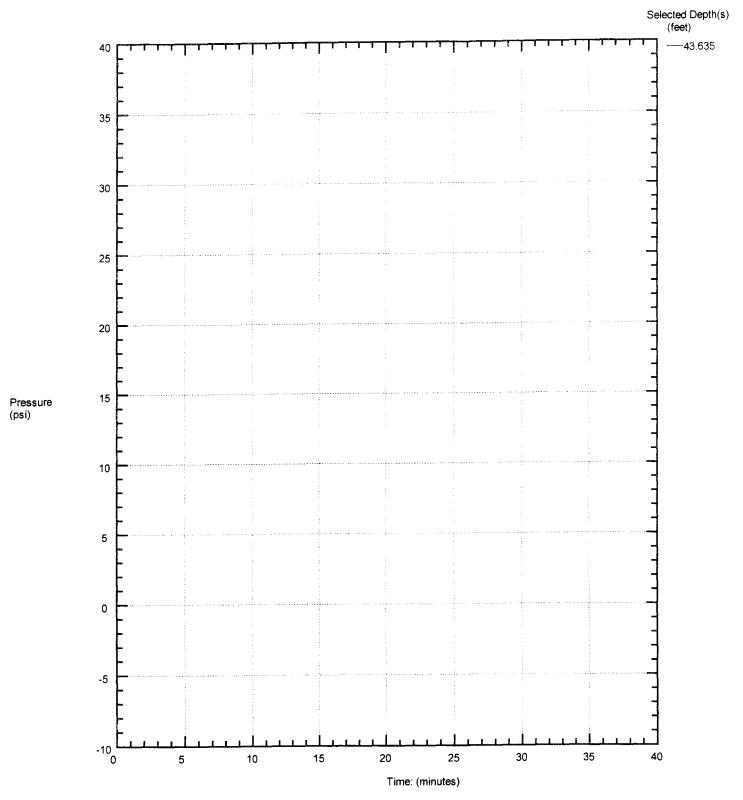
Sounding: FILG63 Cone Used: 4CH

Hydrostatic Pressure



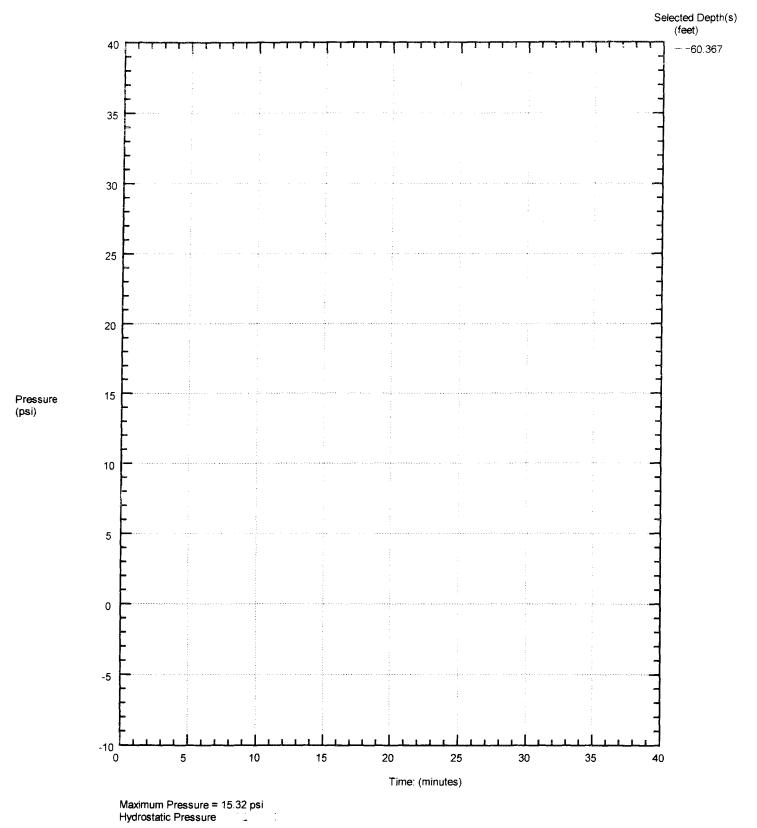
Operator KDV/SVAN/GEOTECH

Sounding: FILG63 Cone Used: 4CH CPT Date/Time: 07-16-02 06:52 Location: P111-22 NW TERMI Job Number: LANDAU/231009.31

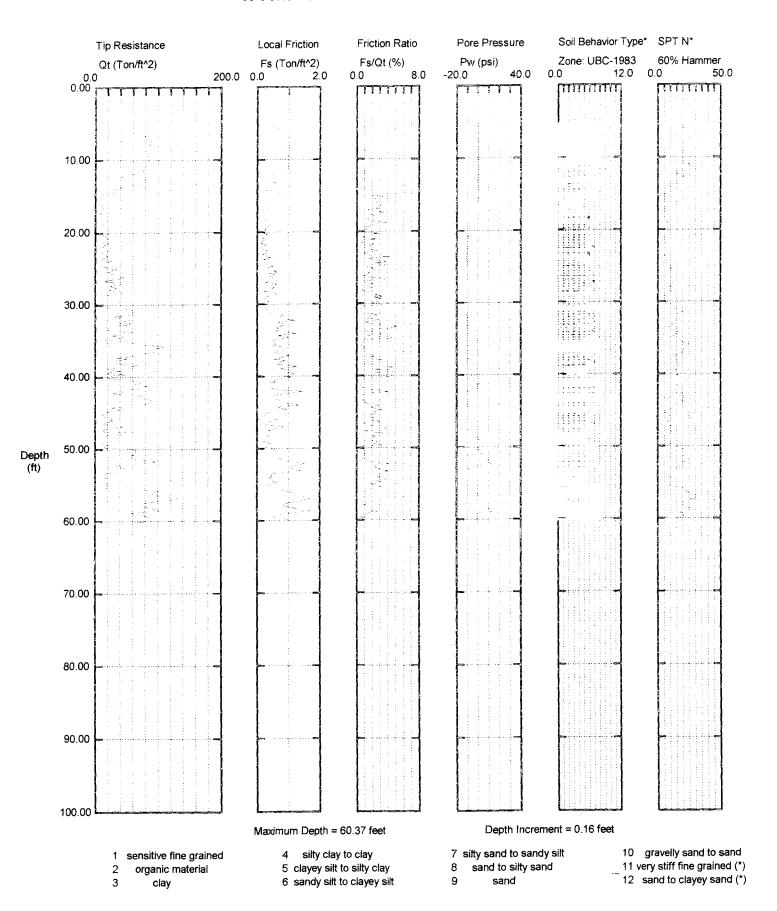


Maximum Pressure = 7.924 psi Hydrostatic Pressure

Operator KDV/SVAN/GEOTECH Sounding: FILG63 Cone Used: 4CH

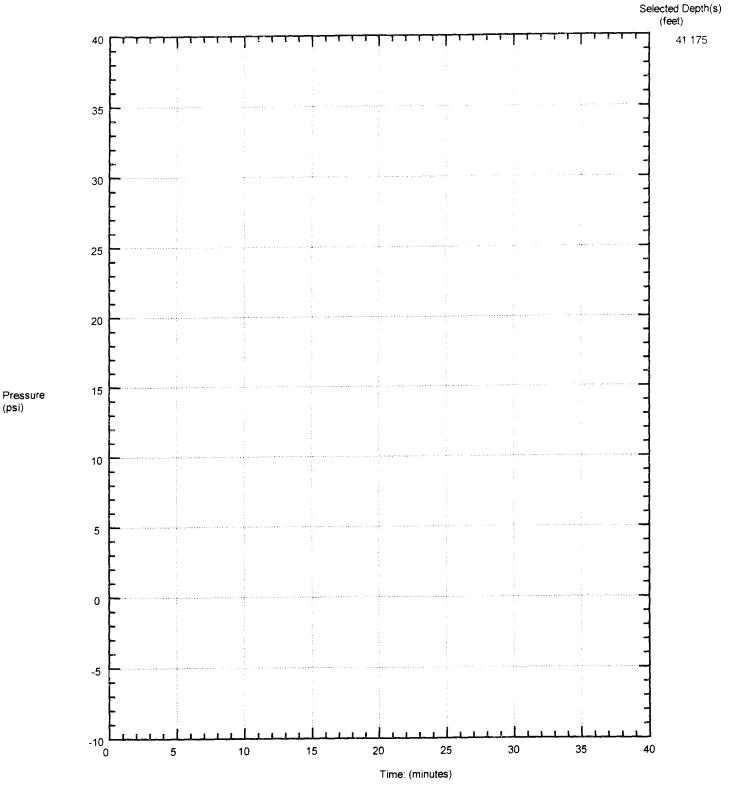


Sounding: FILG30 Cone Used: 4CH



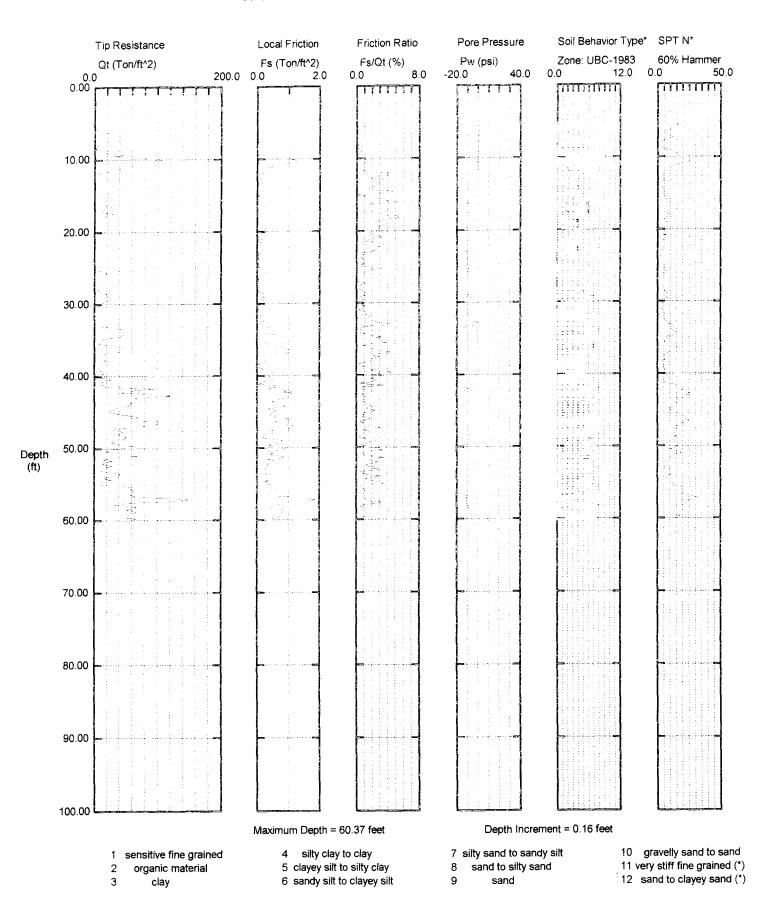
Operator KDV/SVAN/GEOTECH

Sounding: FILG30 Cone Used: 4CH CPT Date/Time: 07-08-02 14:10 Location: P111-23 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 7.019 psi Hydrostatic Pressure

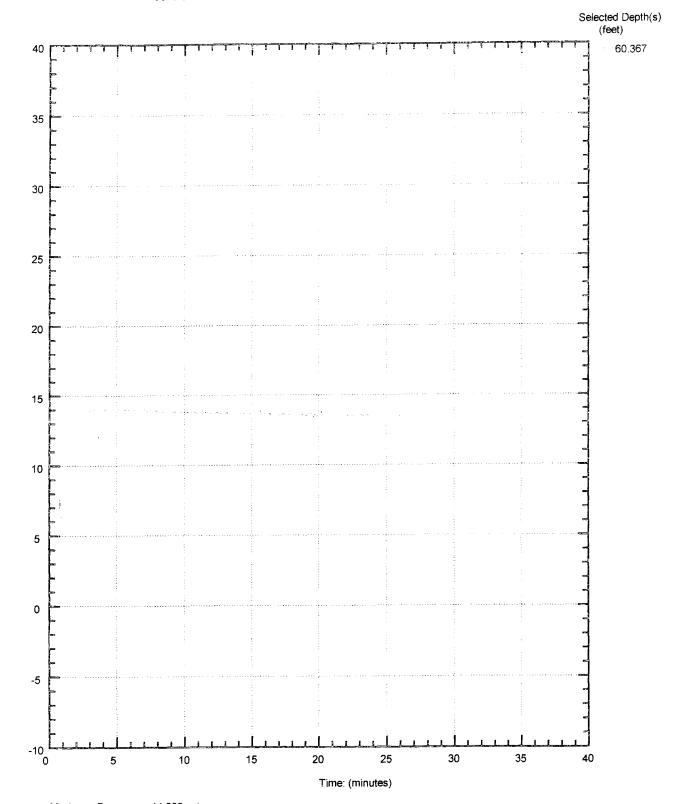
Sounding: FILG41 Cone Used: 4CH



### LANDAU/P111-24/NW TERMINAL

Operator KDV/SVAN/GEOTECH

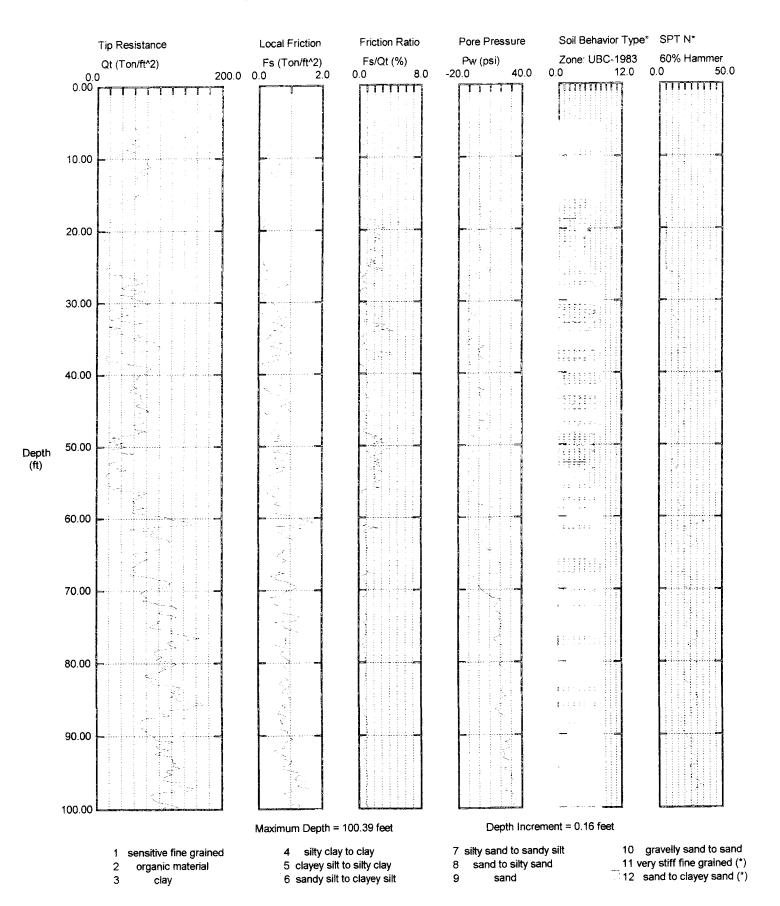
Sounding: FILG41 Cone Used: 4CH CPT Date/Time: 07-09-02 14:44 Location: P111-24 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 14.089 psi Hydrostatic Pressure

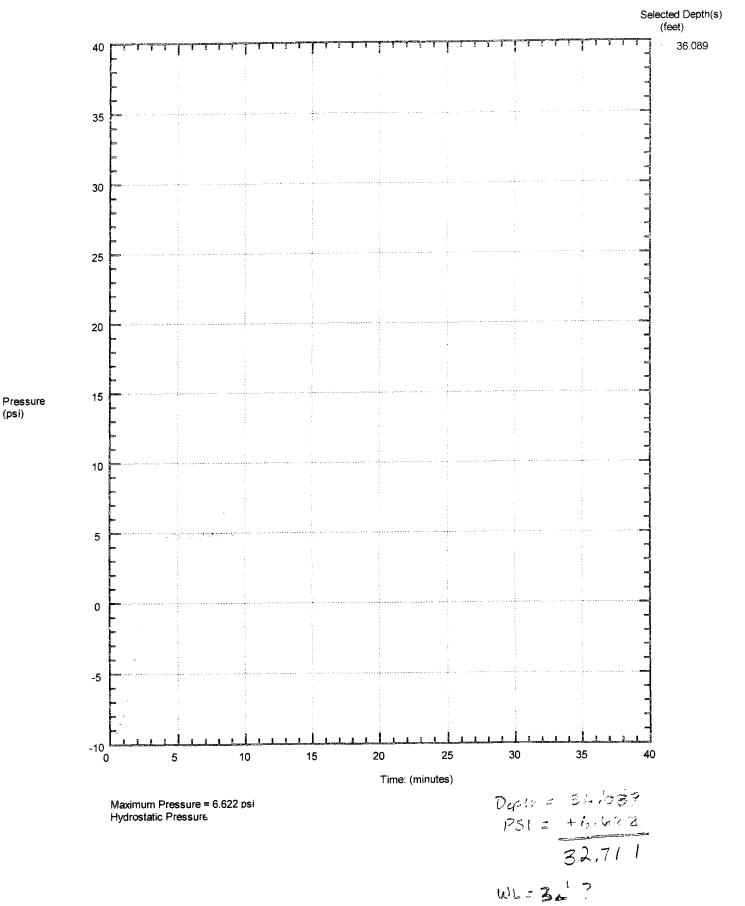
Pressure (psi)

Sounding: FILG27 Cone Used: 4CH



Operator KDV/SVAN/GEOTECH

Sounding: FILG27 Cone Used: 4CH

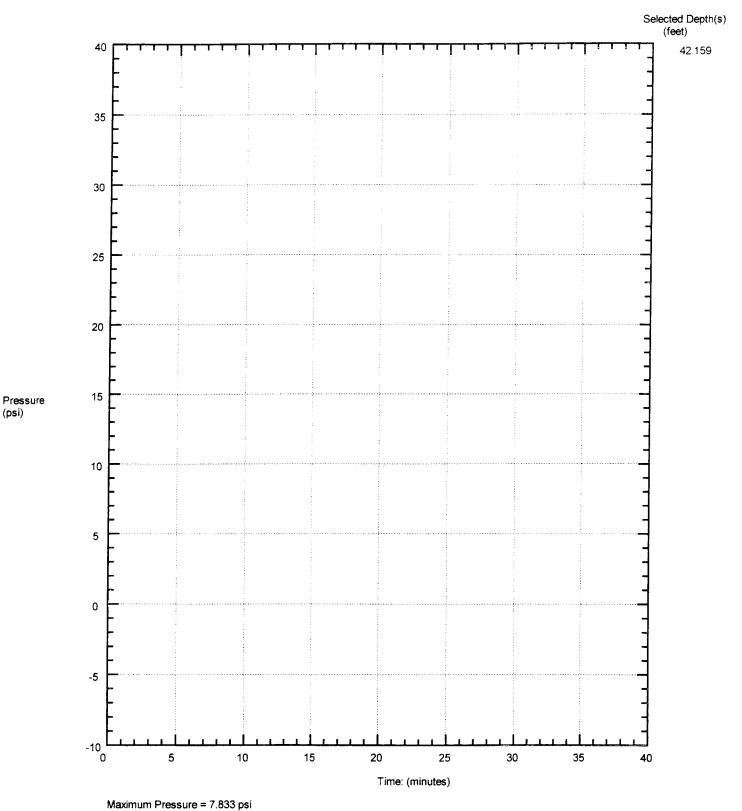


Operator KDV/SVAN/GEOTECH

Sounding: FILG27 Cone Used: 4CH

(psi)

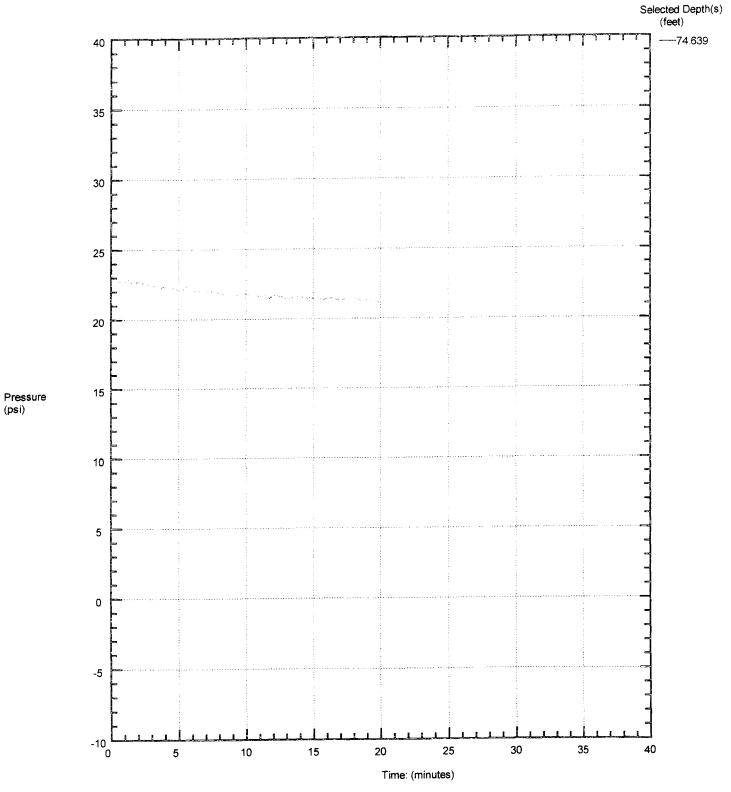
Hydrostatic Pressure



# LANDAU/P111-25/NW TERMINAL

Operator KDV/SVAN/GEOTECH

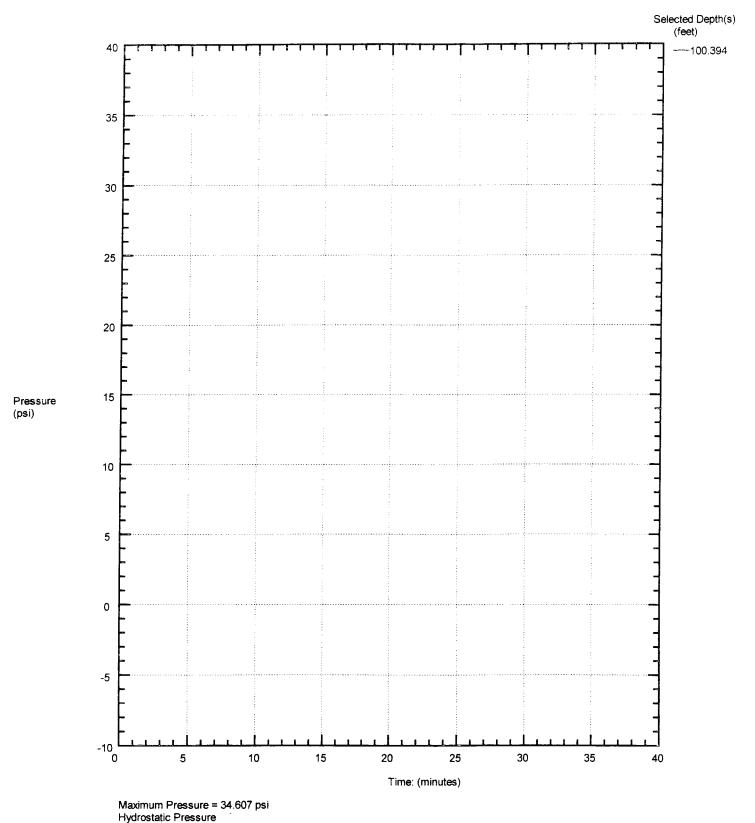
Sounding: FILG27 Cone Used: 4CH CPT Date/Time: 07-08-02 08:57 Location: P111-25 NW TERMI Job Number: LANDAU/231009.31



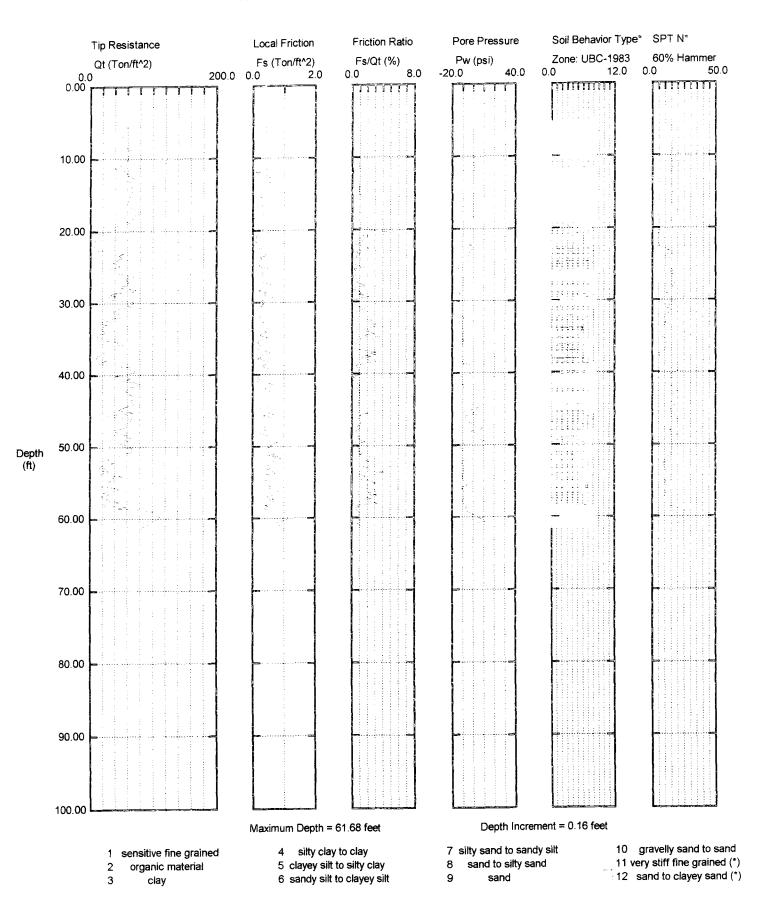
Maximum Pressure = 23.722 psi Hydrostatic Pressure -

Operator KDV/SVAN/GEOTECH

Sounding: FILG27 Cone Used: 4CH

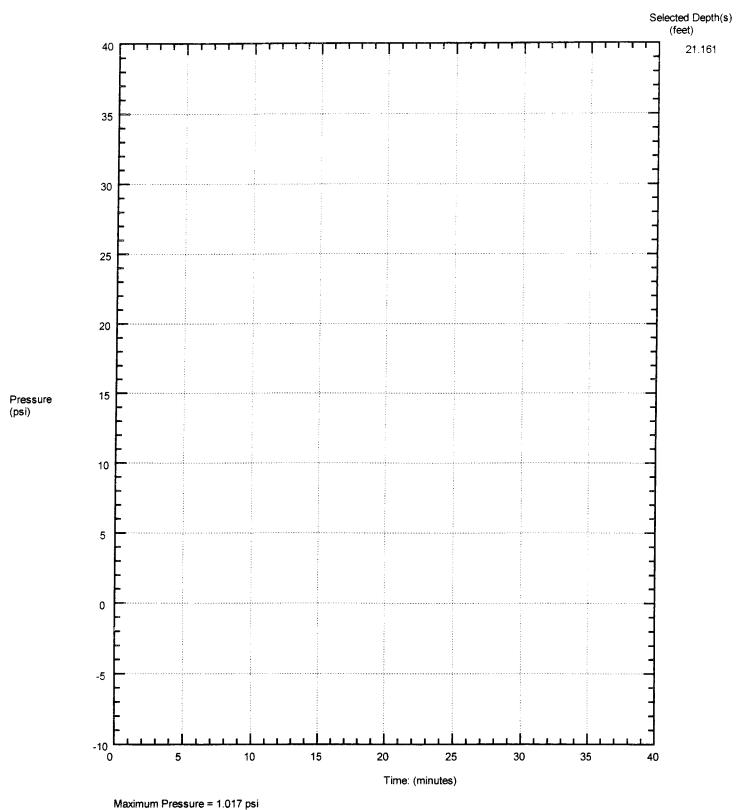


Sounding: FILG61 Cone Used: 4CH



Operator KDV/SVAN/GEOTECH

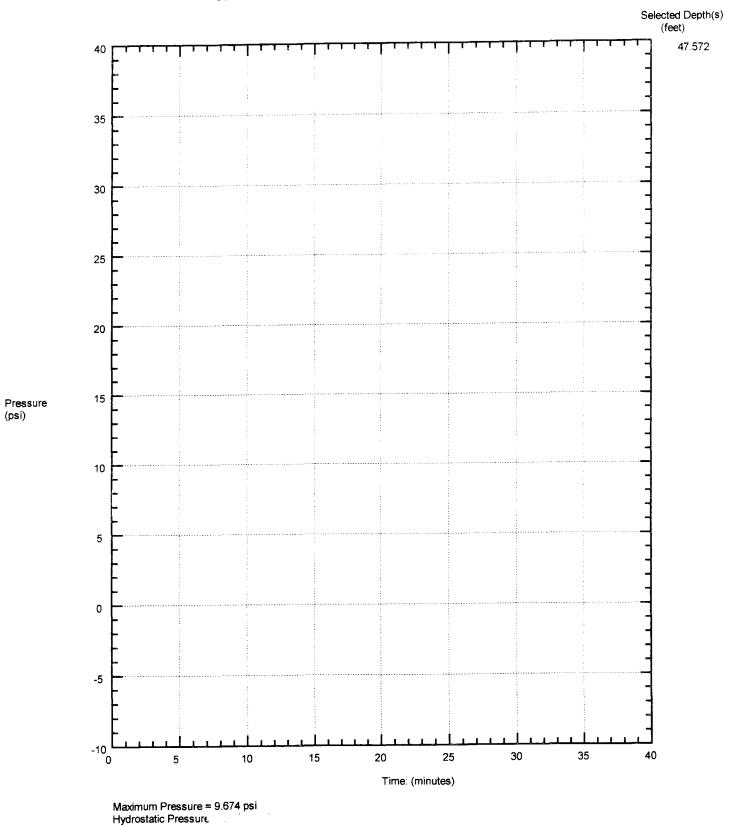
Sounding: FILG61 Cone Used: 4CH CPT Date/Time: 07-15-02 12:12 Location: P111-26 NW TERMI Job Number: LANDAU/231009.31



Hydrostatic Pressure

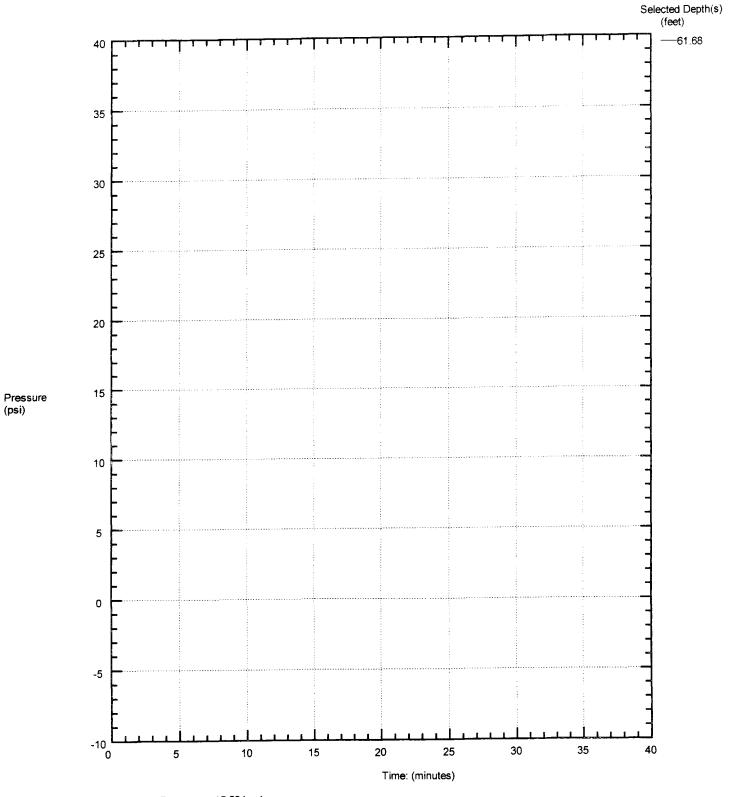
Operator KDV/SVAN/GEOTECH

Sounding: FILG61 Cone Used: 4CH



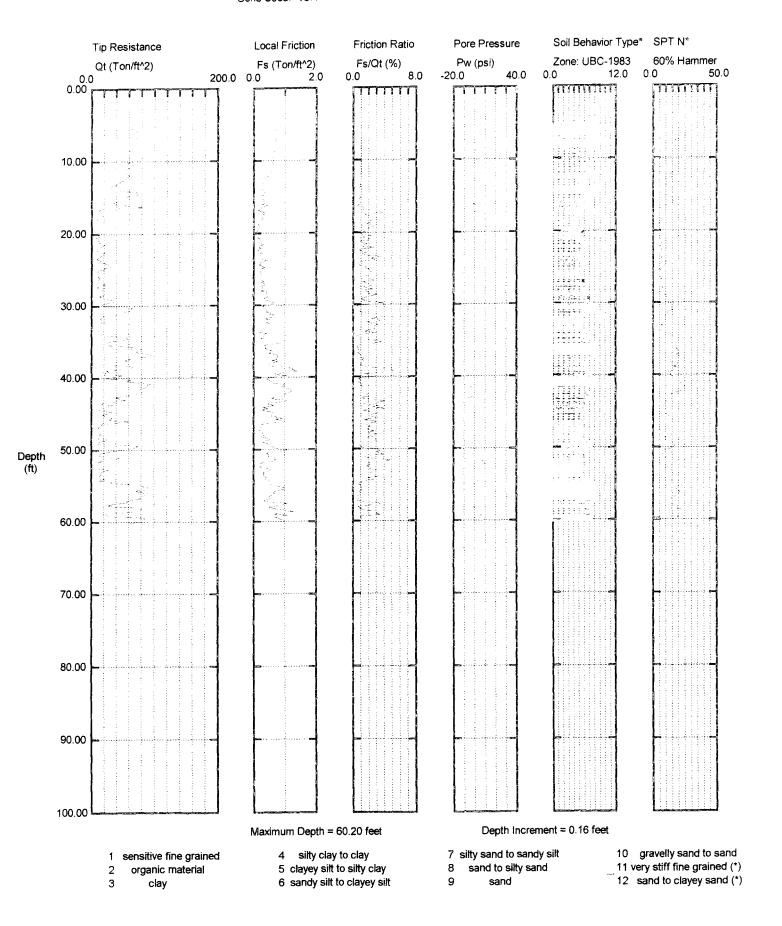
Operator KDV/SVAN/GEOTECH

Sounding: FILG61 Cone Used: 4CH CPT Date/Time: 07-15-02 12:12 Location: P111-26 NW TERMI Job Number: LANDAU/231009.31



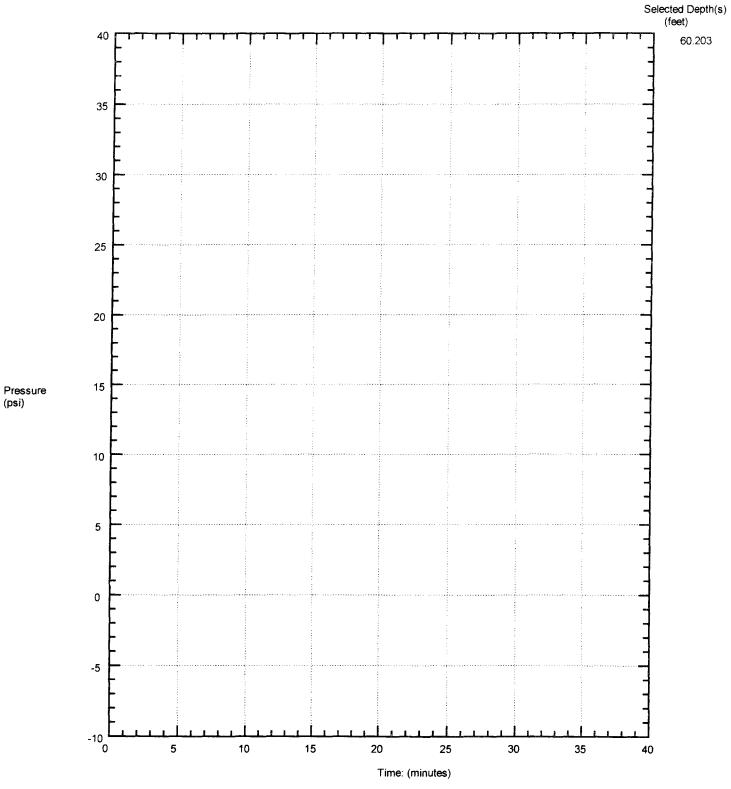
Maximum Pressure = 15.534 psi Hydrostatic Pressure

Sounding: FILG28 Cone Used: 4CH



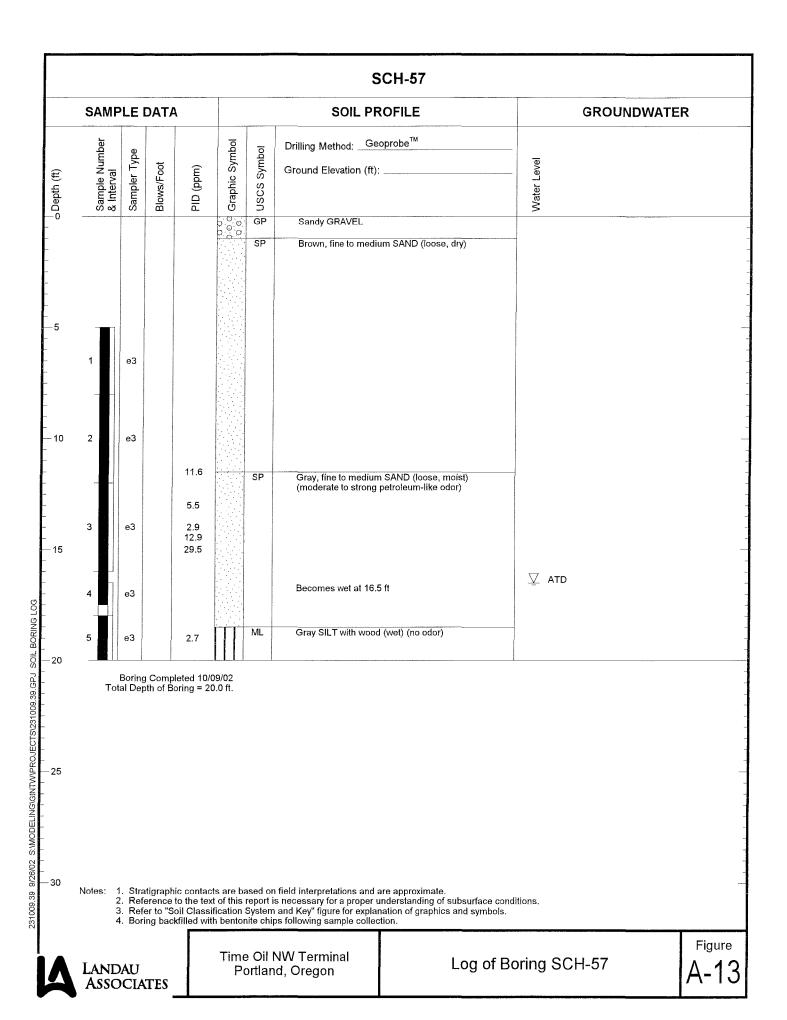
Operator KDV/SVAN/GEOTECH

Sounding: FILG28 Cone Used: 4CH CPT Date/Time: 07-08-02 12:04 Location: P111-27 NW TERMI Job Number: LANDAU/231009.31



Maximum Pressure = 17.151 psi Hydrostatic Pressure

	SAMF	LE I	ATA				SOIL PR	OFILE	GROUN	DWATER
o Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Geo		Water Level	
5	2	e3 e3				SP	Gray, fine to mediu	n SAND, trace silt leum-like odor, no		
5	4	e3					Becomes wet at 16 fi sample	t; sheen at top of	∑ ATD	
20	5	е3				ML	Gray SILT (wet)			MANAGEMENT THE THE THE THE THE THE THE THE THE TH
25	To	Boring tal Dep	(Comple th of Bo	eted 10/0 ring = 20	9/02 .0 ft.					
0										
-	;	2. Ref 3. Ref	erence to er to "So	o the text il Classif	of this	report i System	n field interpretations and a is necessary for a proper u n and Key" figure for explar ps following sample collec	understanding of subsurfa nation of graphics and sy		
		2011		7,,,,,		9,11		T		



SA	IPLE	DATA	<b>L</b>			SOIL PROFILE	GROUNDWATER
iber	Φ			loqu	loc	Drilling Method: Geoprobe <sup>™</sup>	
Sample Number	& Interval Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Ground Elevation (ft):	Water Level
	00 07			0 0 0 0 0 0 0 0 0	GM	Silty, sandy GRAVEL, with crushed rock	
1	e3		1.0 1.0	5 P E	SP	Brown, fine to medium SAND (loose, dry) (no odor, no sheen)	
2	e3		1.0				
3	e3						
4	e3				SP	Gray, with red mottling, fine to medium SAND (loose, moist) Becomes wet at 17.5 ft; trace wood fragments	
5	e3				ML.	Gray SILT (wet)	
	Borin Total De	g Comp pth of B	leted 10/0 oring = 20	09/02 0.0 ft.			
Notes:	<ol><li>Ref</li></ol>	ference	to the tex	t of this	report	n field interpretations and are approximate. s necessary for a proper understanding of subsu nand Key'' figure for explanation of graphics and	uface conditions.

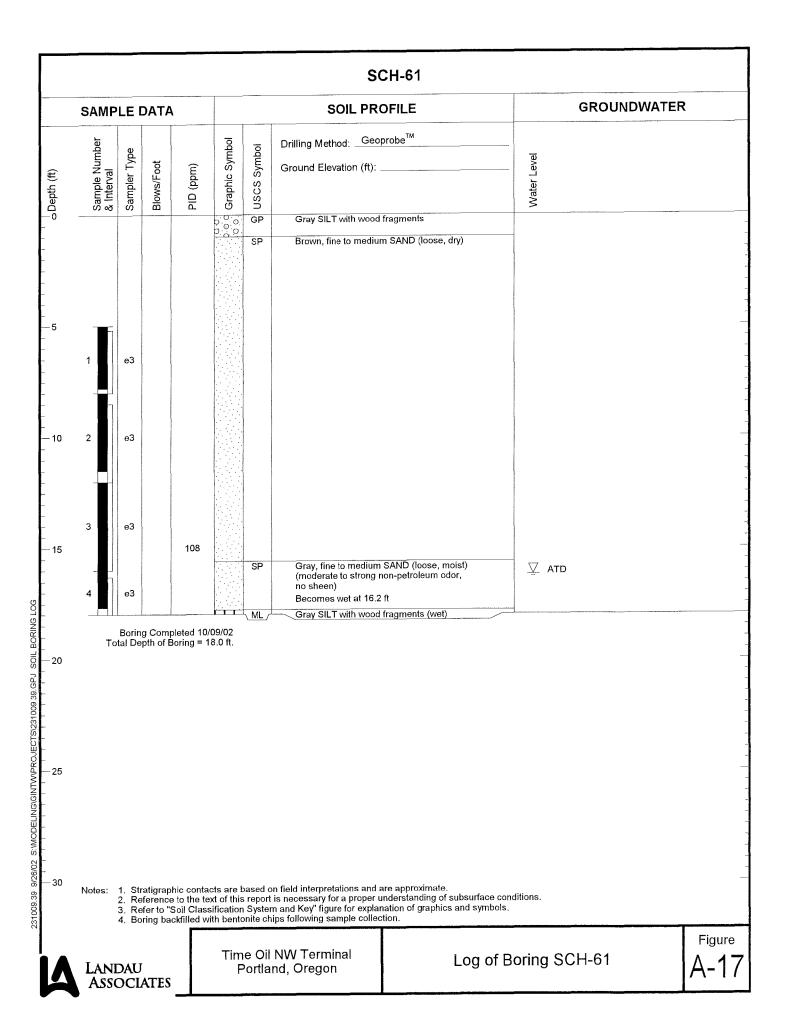
Time Oil NW Termina Portland, Oregon

Log of Boring SCH-58

A-14

Drilling Method: Geograble Management of the least of the		SAMP	LE [	ATAC	١.			SOIL PROFII	_E	GROUNDWATER	
SP Gray, fine to medium SAND (loose, midst)  SP Gray, fine to medium SAND (loose, midst)  (moderate to strong non-petroleum odor, no sheer)  Brown, fine to medium SAND (loose, midst)  (moderate to strong non-petroleum odor, no sheer)  Boring Completed 1009/02  Total Depth of Boring = 18.0 ft.  Notes:  1. Strattgraphic contacts are based on field interpretations and are approximate. Provided to the text of this report is necessary for a capproximate standard or approximate. Provided to the text of this report is necessary for a capproximate standard or approximate. Provided to the text of this report is necessary for a capproximate standard or approximate. Provided to the text of this report is necessary for a capproximate standard or approximate. Provided to the text of this report is necessary for a capproximate standard or approximate.		ample Number Interval	ampler Type	slows/Foot	(mdd) 🛭 la	Sraphic Symbol	JSCS Symbol				
SP Gray, fine to medium SAND (loose, moist) (moderate to strong non-petroleum odor, no sheen)  4 10.3 3 35 39 4 Becomes wet at 17 ft  Boring Completed 10/09/02 Total Depth of Boring = 18.0 ft.  Notes: 1. Stratigraphic contacts are based on field interpretations and are approximate. 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions. 3. Before to "Sand (lease) fields in Stephen and Key filling of subsurface conditions.			S	<u> </u>	<u>a.</u>	- 1	GM		crushed rock		
Motes: 1. Stratigraphic contacts are based on field interpretalions and are approximate.   2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.   3. Refer to "Soil Classification System and Rev." fluer for explanation of graphics and symbols.											
Notes: 1. Stratigraphic contacts are based on field interpretations and are approximate.  2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.  3. Refer to "Soil Classification System and Key" four for explanation of graphics and symbols.		3	e3		10.3 35		SP	(moderate to strong non-p	D (loose, moist) etroleum odor,		
Boring Completed 10/09/02 Total Depth of Boring = 18.0 ft.  Notes: 1. Stratigraphic contacts are based on field interpretations and are approximate. 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions. 3. Refer in "Soil Classification System and Key" figure for explanation of graphics and symbols.		4	e3				- MI -			Z ATD	
Notes: 1. Stratigraphic contacts are based on field interpretations and are approximate. 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions. 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.		То	Borin tal De	g Com <sub>l</sub>	oleted 10/ Boring = 1	09/02 8.0 ft.					
" Baring warming the control of the	)		<ol> <li>Re</li> <li>Re</li> </ol>	ference	e to the te Soil Class	xt of this sification	report Svster	is necessary for a proper unders n and Kev" figure for explanation	standing of subsurface conditions	S.	

	0445		DATA					CH-60	CROUN	IDIMATED
	SAMP	LEI	DATA				SOIL PR		GROUP	IDWATER
o Depuii (ii)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Geo		Water Level	
)		S	ш	<u>п</u>	0000	GP	Sandy GRAVEL		>	
					5 0 0	SP	Brown, fine to mediu	m SAND (loose, dry)		
5	1	e3								
				2.4						
)	2	e3	MACATA AND AND AND AND AND AND AND AND AND AN	2.7		The second secon				
5	3	e3	THE RESIDENCE OF THE PERSON OF							
	4	e3				SP	Gray, fine to medium	SAND (loose, wet)	<u> </u>	
_	5	e3			ПП	ML	Gray SILT with wood	fragments (wet)		
:5			g Comple oth of Bor							
0	2	. Ref	erence to er to "So	the tex il Classi	t of this fication	report i System	n field interpretations and a is necessary for a proper u n and Key" figure for explar	nderstanding of subsurfac ation of graphics and sym		
	4	. Born	ing backt	med wit			ps following sample collec	uon.		Figur A-1
	LAND Asso	AU					NW Terminal nd, Oregon	Log	of Boring SCH-60	ΙΛ 4



	SAMP	LE I	DATA				SOIL PRO	OFILE	GROUN	IDWATER
	per	Φ			loqu	<u> 0</u>	Drilling Method: Geor	probe <sup>TM</sup>		
-	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Ground Elevation (ft):		Water Level	
	% & %	Sa	ă	直		Ď GP	Sandy GRAVEL		<u> </u>	
					0.0.0	SP	Brown, fine to mediur	n SAND (loose, dry)		
	1	e3								
			**************************************	0.0						
0	2	e3		0.0						
5	3	e3		0.0			Red mottling			
	4	e3		0.0		SP	Gray, fine to medium (no odor, no sheen)	SAND (loose, wet)	\(\sum_{\subset}\) ATD	
	5	еЗ				ML	Gray SILT with trace	organic material (wet)		
5	To	Borin tal De	g Comp pth of B	leted 10/ pring = 2	/09/02 20.0 ft.					
0		2, Re 3. Re	ference fer to "S	to the te	ext of this sification	report Systei	on field interpretations and a . is necessary for a proper u m and Key" figure for explan iips following sample collect	inderstanding of subsurfact nation of graphics and sym	e conditions. bols.	T
_	Lani Asso				Tim	e Oil	NW Terminal		of Boring SCH-62	

**SCH-63 SAMPLE DATA SOIL PROFILE GROUNDWATER** Sample Number & Interval Drilling Method: Geoprobe™ Graphic Symbol USCS Symbol Sampler Type Water Level Blows/Foot PID (ppm) Ground Elevation (ft): Depth (ft) GP Sandy GRAVEL SP Brown, fine to medium SAND (loose, dry) еЗ 10 еЗ 3 еЗ 43 SP Gray, fine to medium SAND (loose, moist) (moderate to strong petroleum-like odor, no sheen)  $\sqrt{}$  ATD Becomes wet at 16 ft ML Gray SILT (wet) Boring Completed 10/09/02 Total Depth of Boring = 18.0 ft. 20 - 25 30 Stratigraphic contacts are based on field interpretations and are approximate.
 Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
 Boring backfilled with bentonite chips following sample collection. Notes: Figure



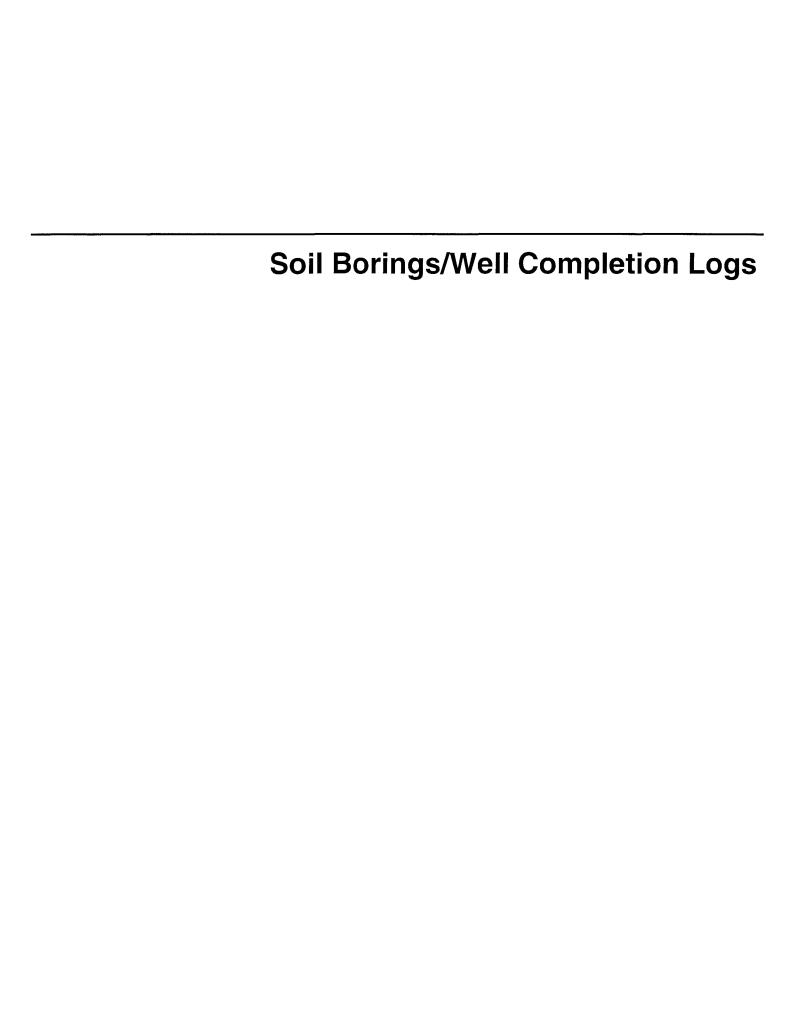
9/26/02 S:MODELING\GINTW\PROJECTS\231009.39.GPJ SOIL BORING LOG

231009.39

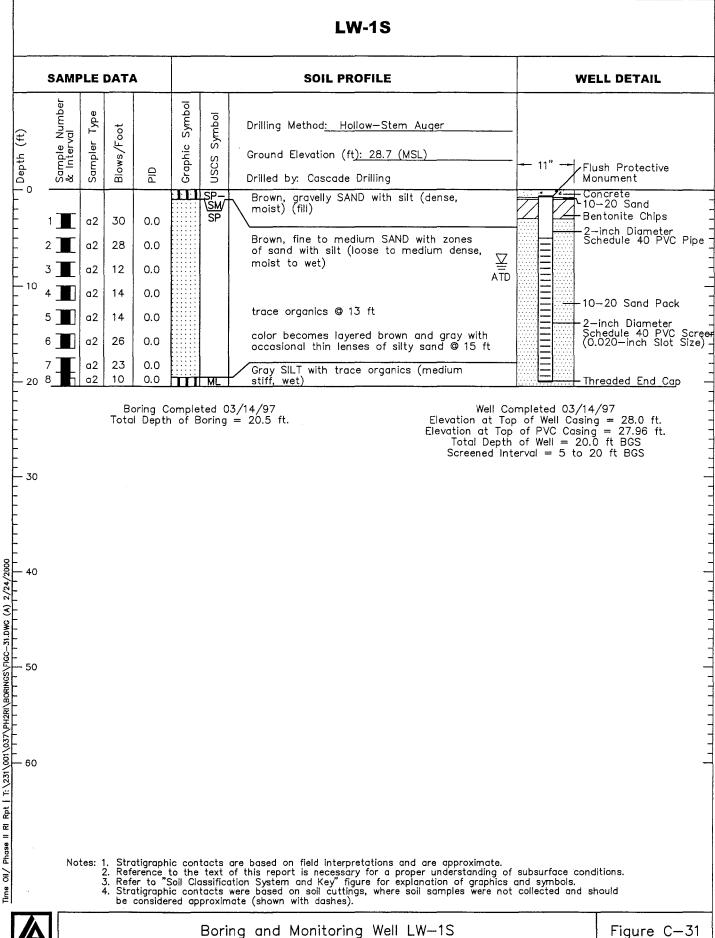
Time Oil NW Terminal Portland, Oregon

Log of Boring SCH-63

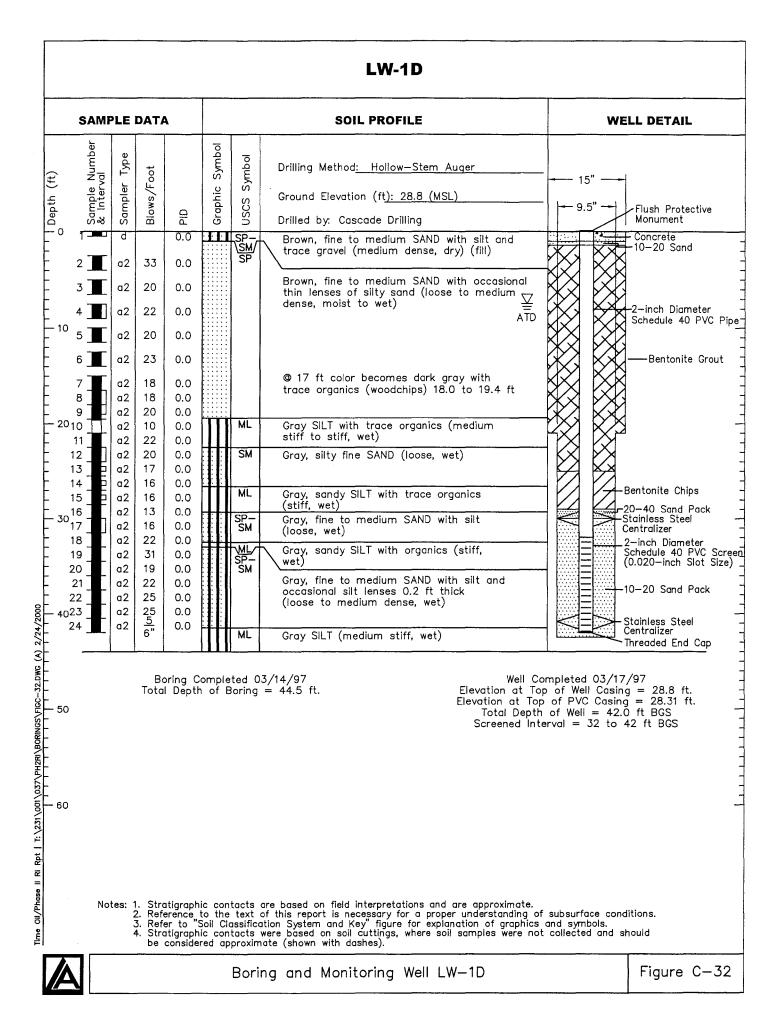
A-19

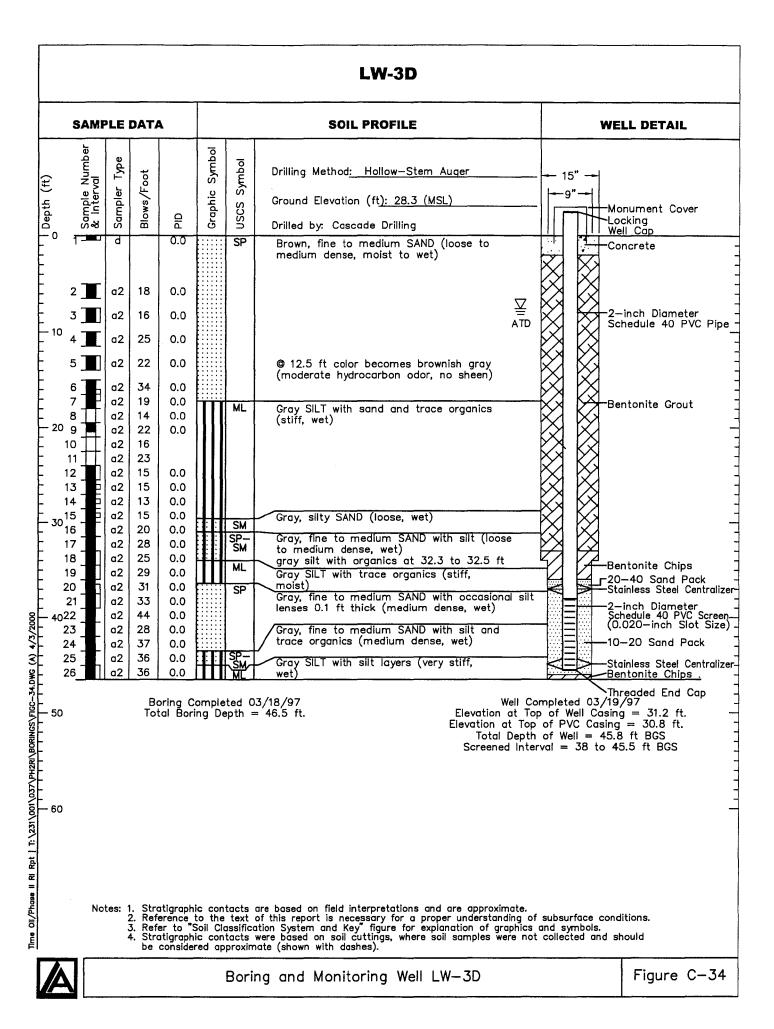


SAN	IPLE	DATA	ACCUPATION OF THE PROPERTY OF		SOIL PROFILE	DETAIL		
Depth (ft) Sample Number	Sampler Type	Blows/Foot	Graphic Symbol	USCS Symbol	Drilling Method: Geoprobe  Ground Elevation (ft): 28 (MSL)  Drilled By: Cascade Drilling	Groundwater	n →	
-0				SP	Brown, fine to medium SAND (loose to medium dense, moist to wet) (no odor, no sheen)  (geologic interpretation from 0 to 14 ft inferred from boring log at LW-4D, located approximately 170 ft to the northwest)			
-15 1	d3	With the second		SP	Reddish brown, fine to medium SAND (moist)	∑ ATD		
2	d3			SP SM/ ML	Dark brown to gray, fine to medium SAND with coarse sand (wet)  Dark gray, sandy SILT to silty fine SAND			
3   -20 4	d3			ML ML	(moist)  Dark gray, SILT mottled with gray clay (moist)  Dark gray, SILT with trace sand (moist)			
5 - -25 6	d3			SP	Dark gray, fine SAND with 0.2' thick layers of silt (moist to wet)			
- 7 	d3			SM	Light brown, silty SAND mottled with light brown, fine to medium SAND with silt (wet)			
 -35	Total I	Boring Depth of Bori	Completed ng = 34.0 ft.					
-40 N	otes:	<ol> <li>Reference</li> <li>Refer to</li> </ol>	e to the text Soil Classific	of this	used on field interpretations and are approximate.  report is necessary for a proper understanding of subsurface or  System and Key" figure for explanation of graphics and symbor  pased on soil cuttings where soil samples were not collected a	ls.		

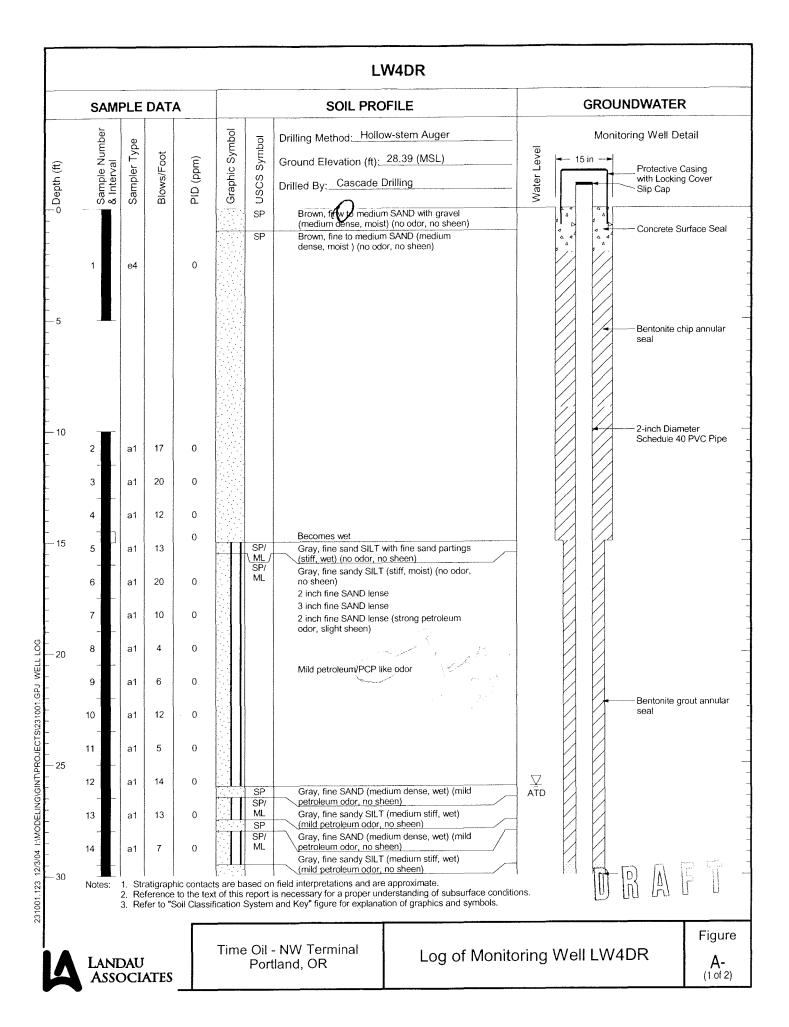


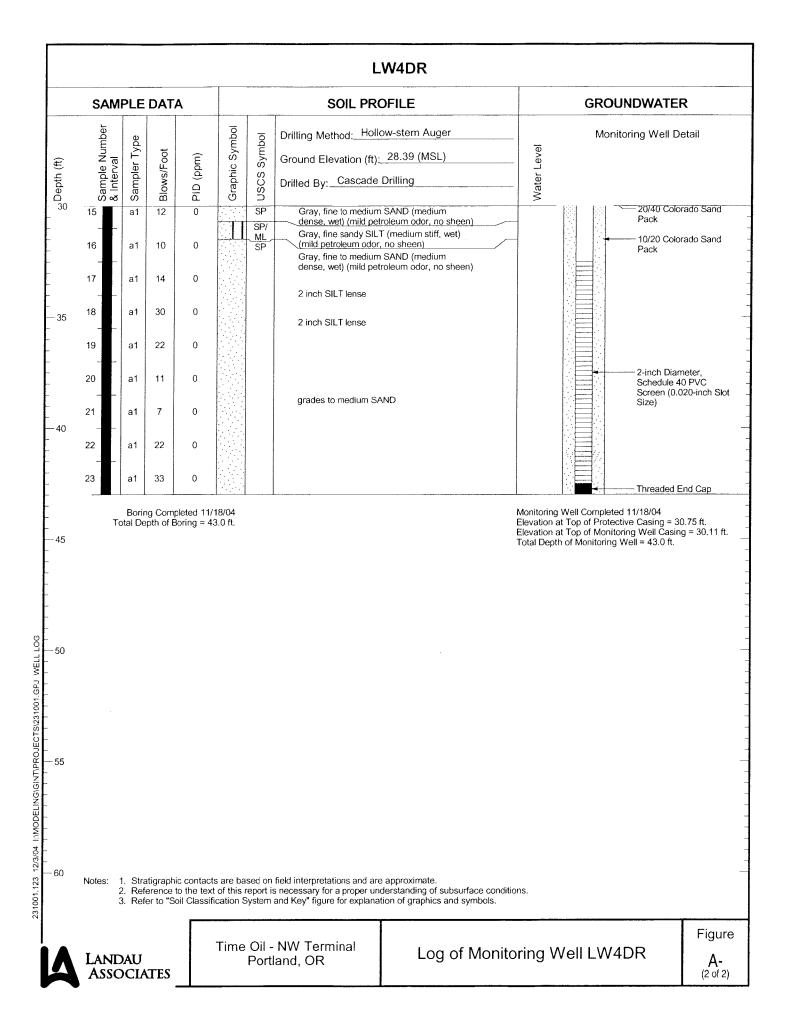
Boring and Monitoring Well LW-1S

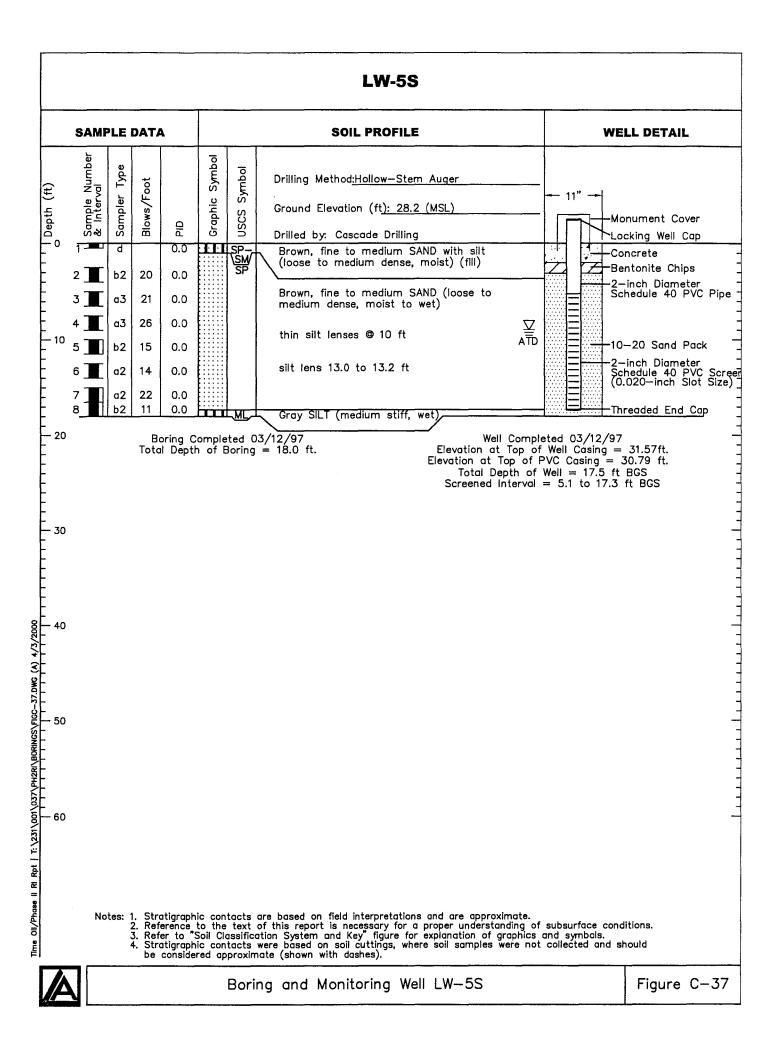


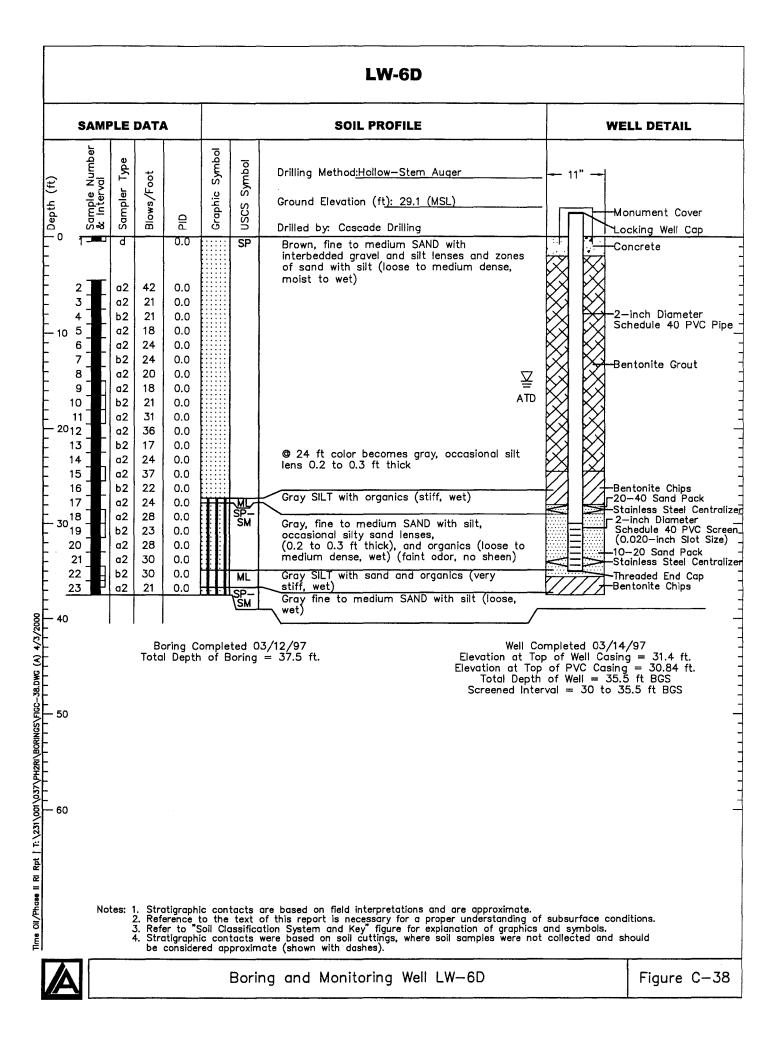


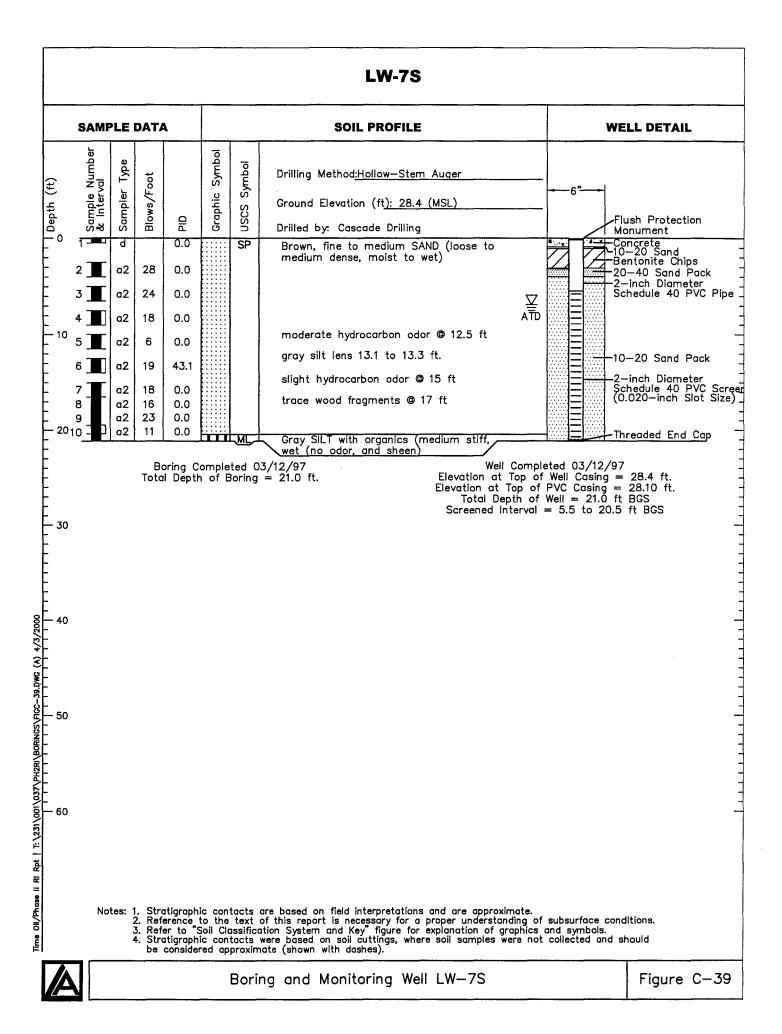
## **LW-4S SAMPLE DATA SOIL PROFILE WELL DETAIL** Sample Number & Interval Graphic Symbol Symbol Drilling Method: Hollow-Stem Auger Blows/Foot Depth (ft) Sampler Ground Elevation (ft): 28.3 (MSL) **USCS** -Monument Cover Locking Well Cap Drilled by: Cascade Drilling -Concrete 110-20 Sand -Bentonite Chips SP Brown, fine to medium SAND (loose to medium dense, moist to wet) 35 α2 0.0 -20—40 Sand Pack -2—inch Diameter Schedule 40 PVC Pipe some sandy gravel from 2.5 to 4.0 ft α2 18 0.0 19 0.0 α2 α2 17 0.0 10-20 Sand Pack **b2** 26 0.0 -2—inch Diameter Schedule 40 PVC Screer (0.020—inch Slot Size) α2 11 0.0 Gray SILT with trace organics (medium stiff, wet) (slight organic α2 17 0.0 Threaded End Cap odor, no sheen) 8 **b2** 10 0.0 Boring Completed 03/13/97Total Depth of Boring = 20.0 ft. Well Completed 03/14/97 Elevation at Top of Well Casing = 31.0 ft. Elevation at Top of PVC Casing = 30.26 ft. Total Depth of Well = 18.5 ft BGS Screened Interval = 5.5 to 18.0 ft BGS 30 Time Oil/Phase II RI Rpt | T:\231\001\037\PHZRI\BORINGS\FIGC-35.DWG (A) 4/3/2000 40 - 50 - 60 Notes: 1. Stratigraphic contacts are based on field interpretations and are approximate. 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions. 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols. 4. Stratigraphic contacts were based on soil cuttings, where soil samples were not collected and should be considered approximate (shown with dashes). Boring and Monitoring Well LW-4S Figure C-35

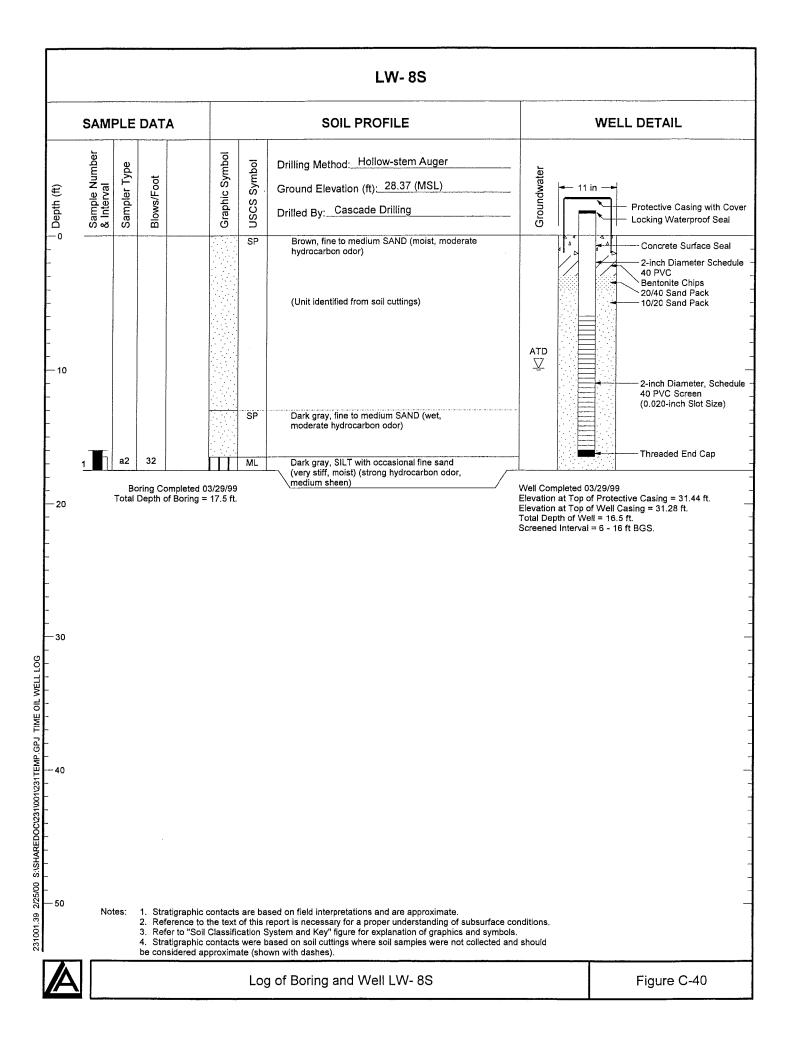


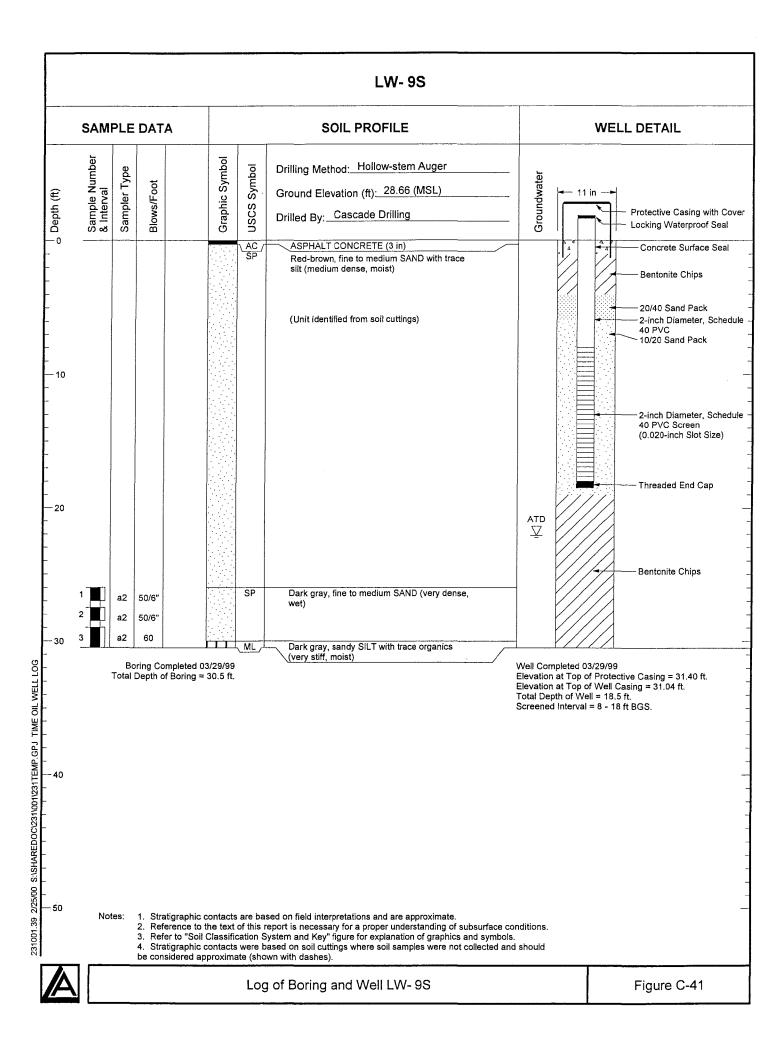


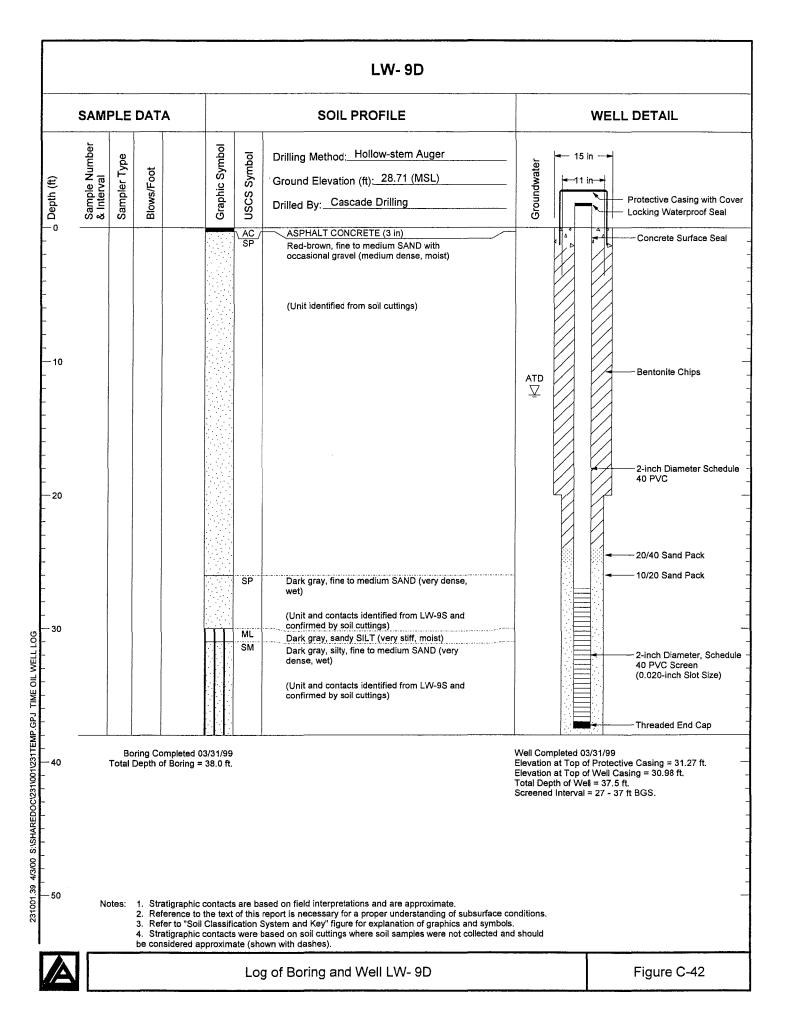


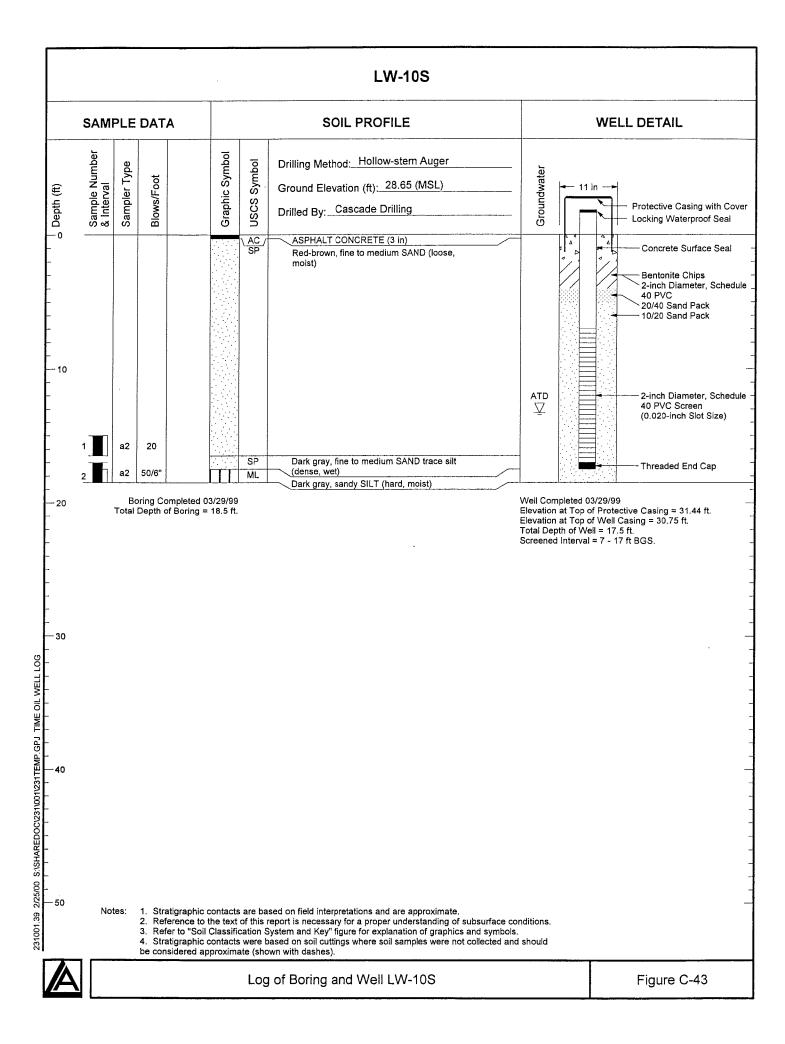


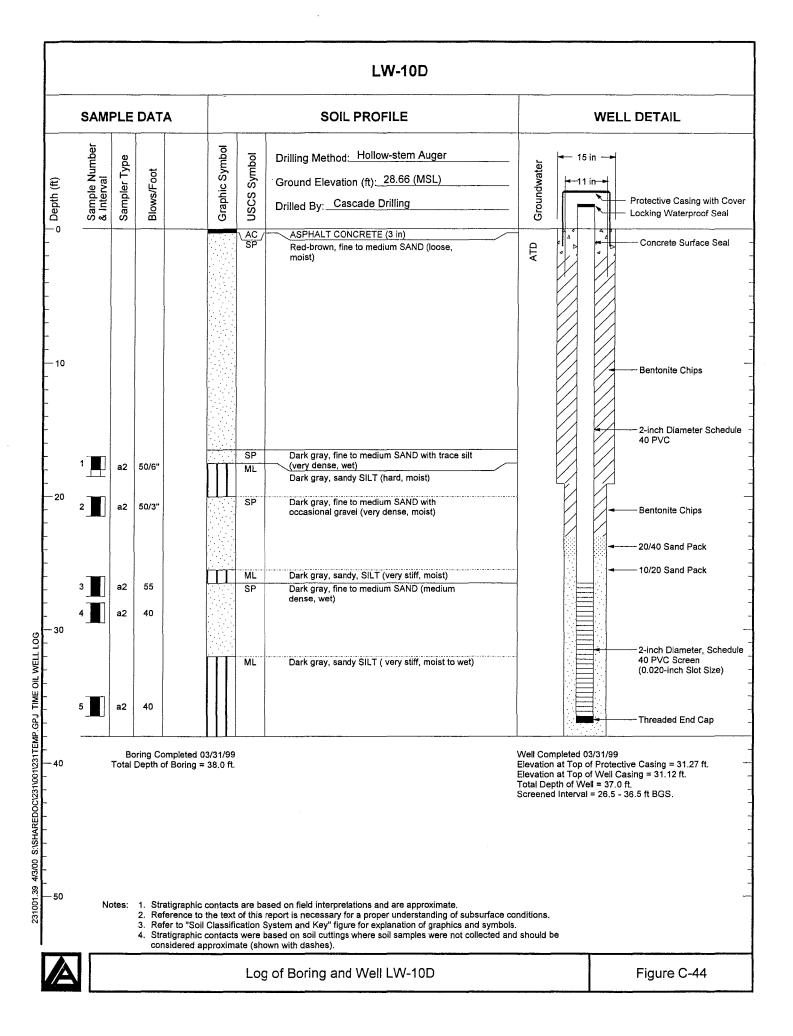


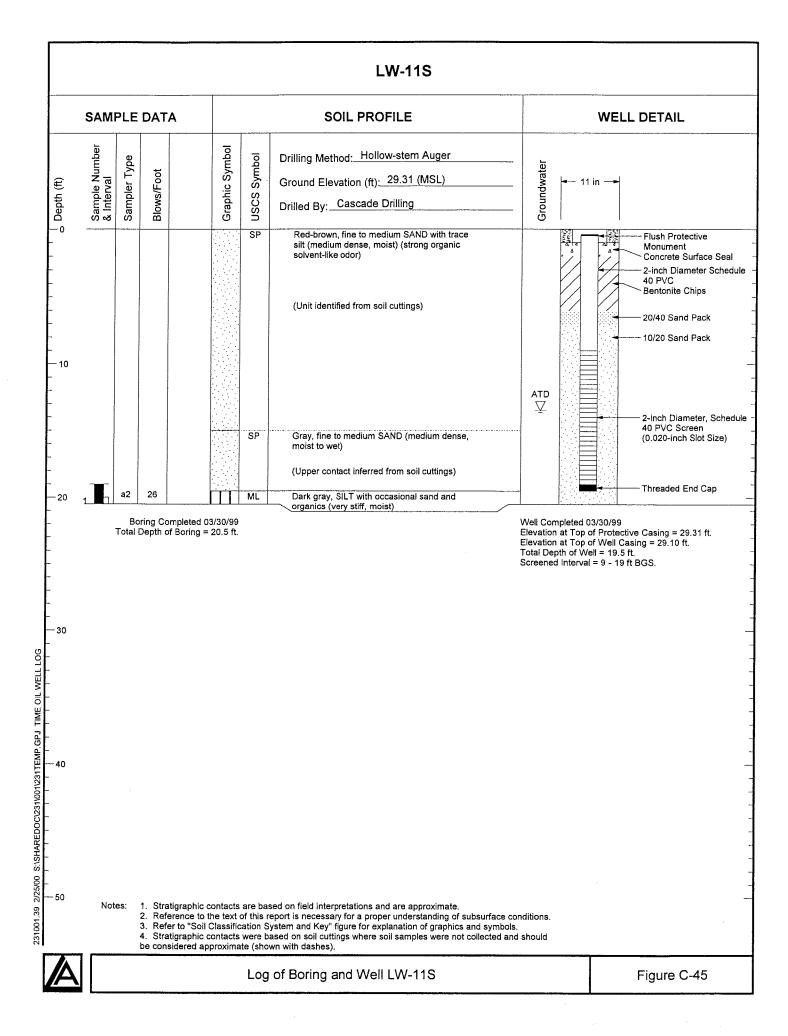


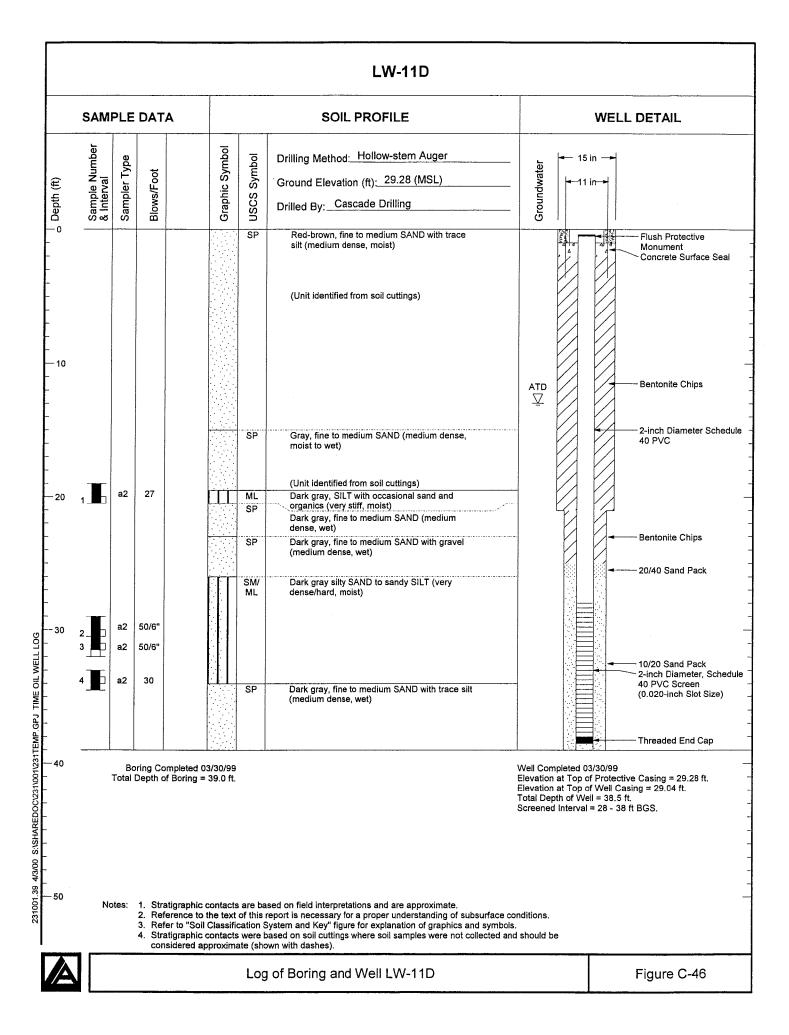


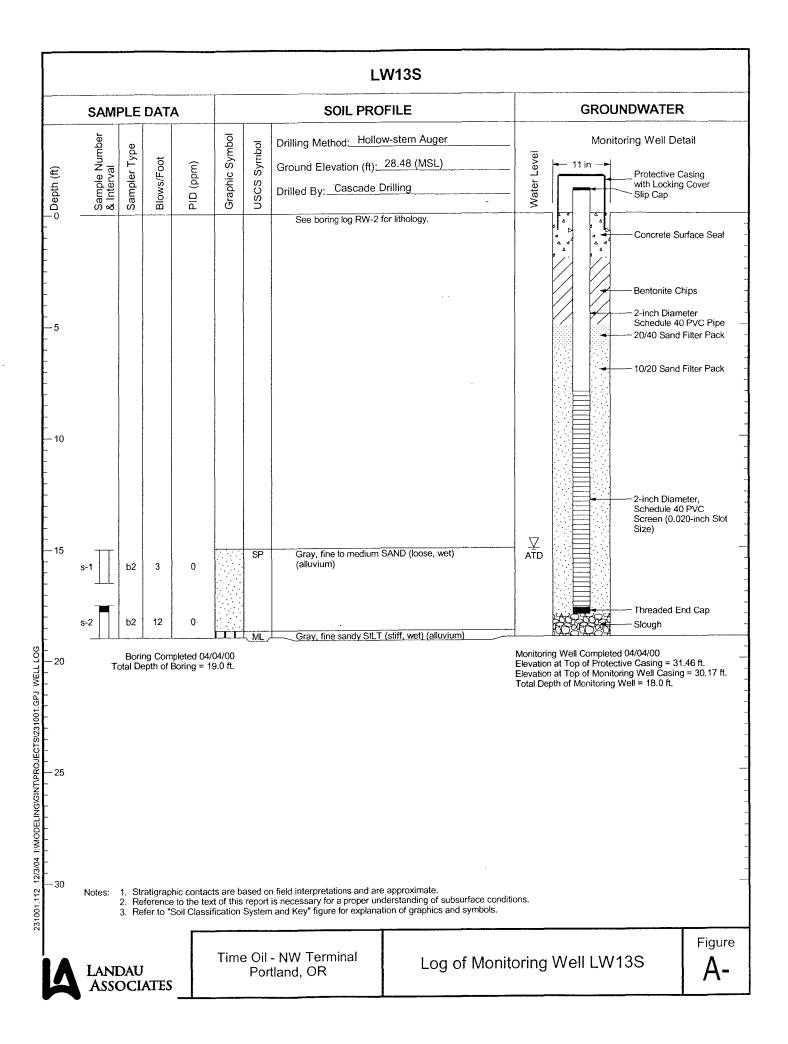


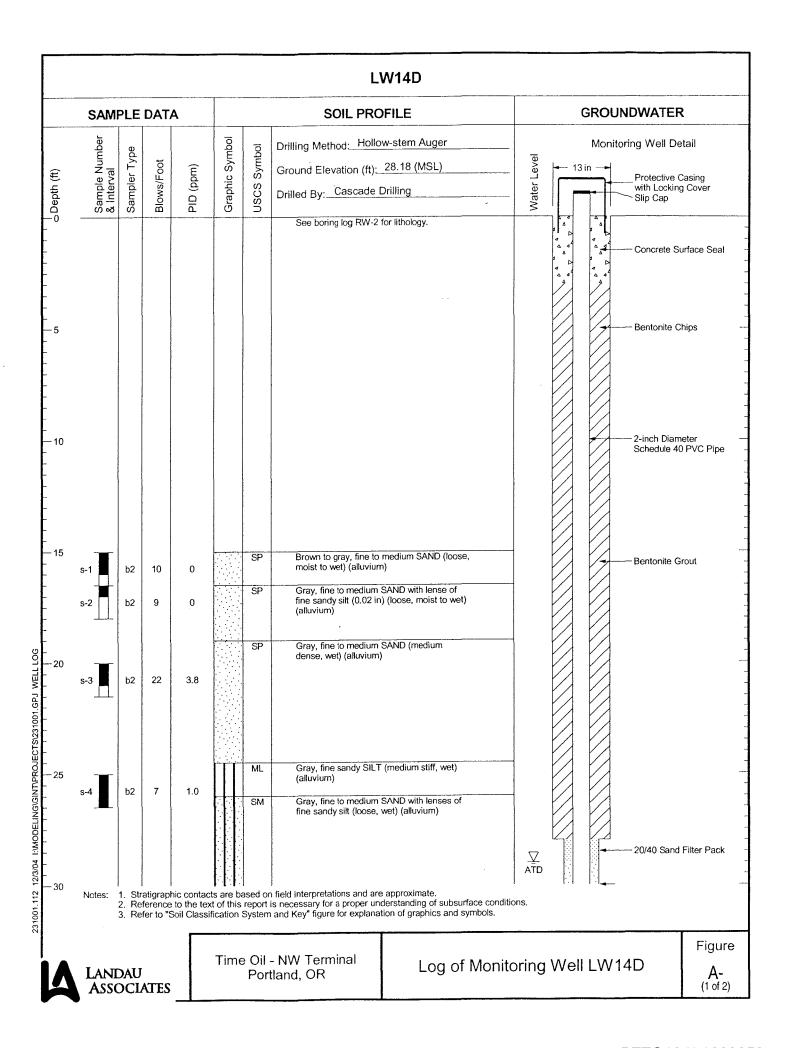


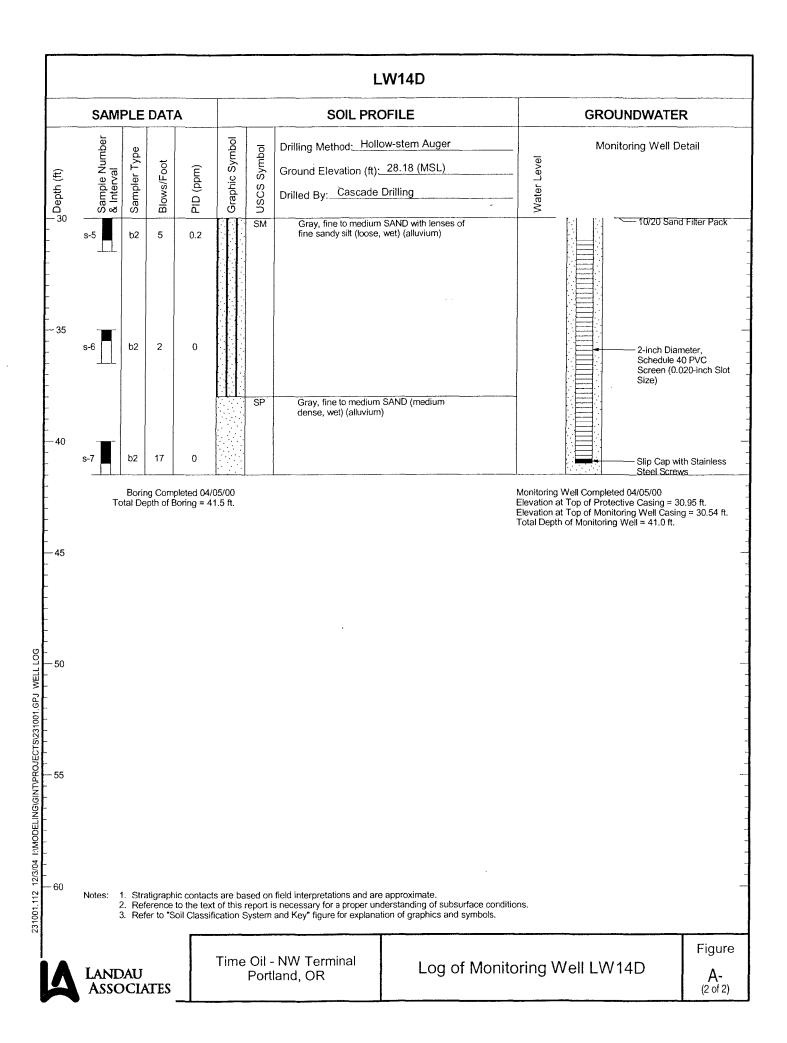


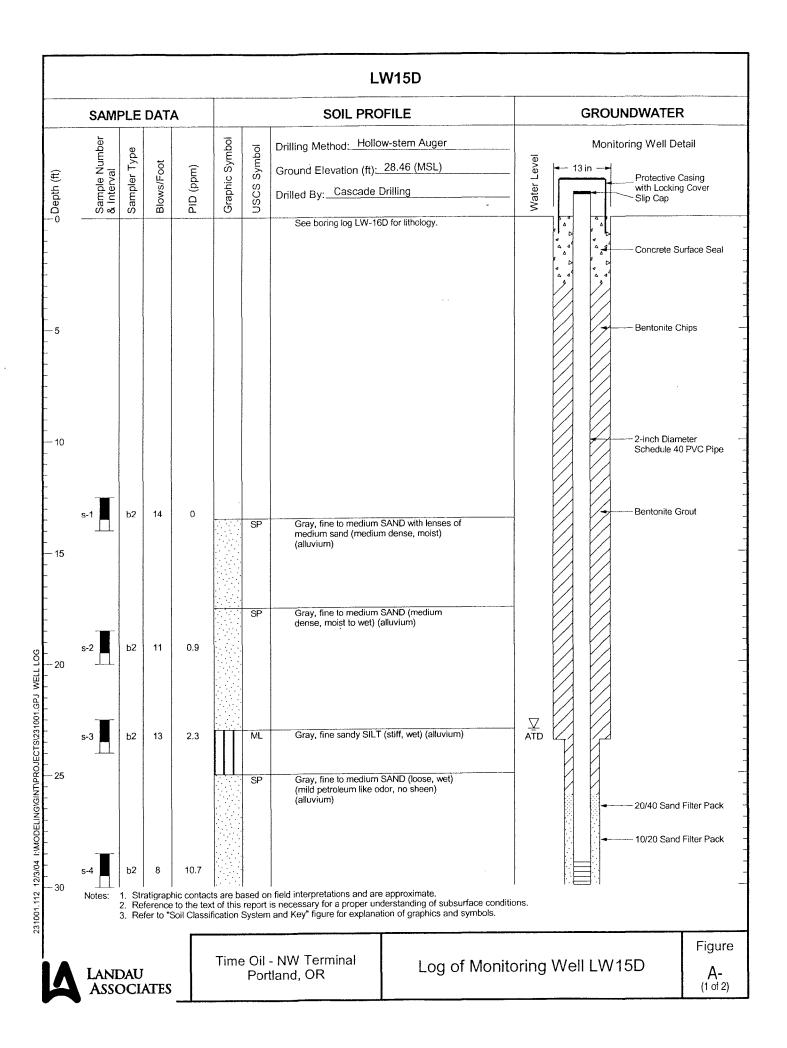


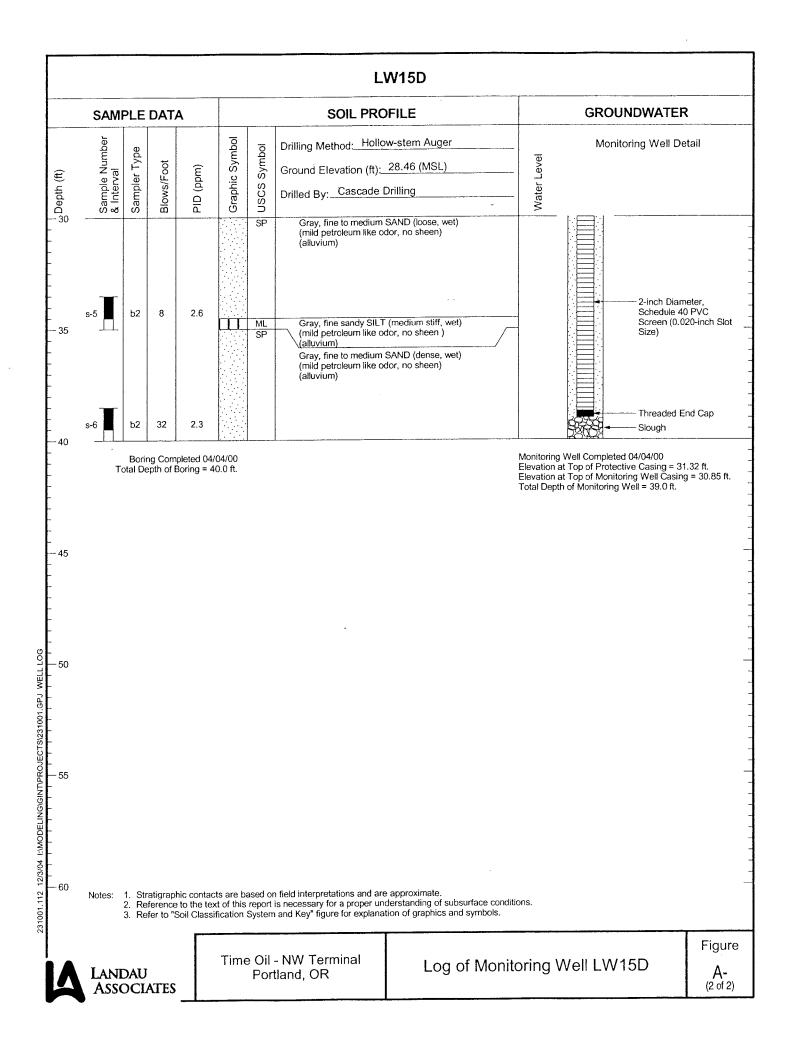


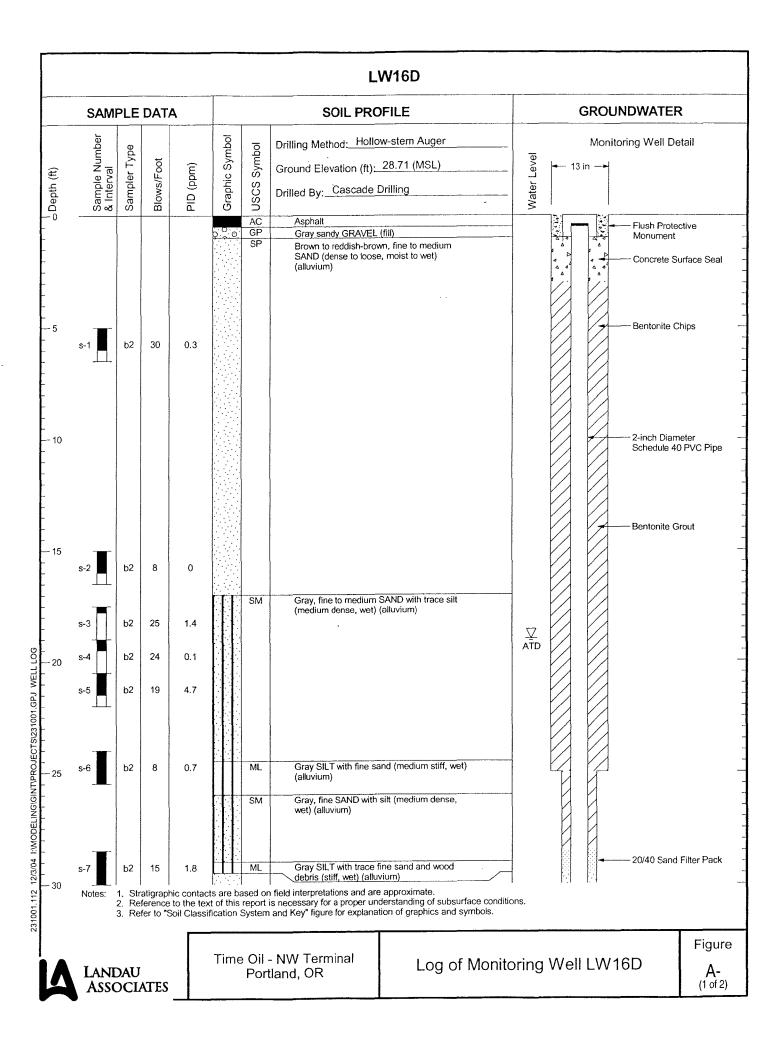


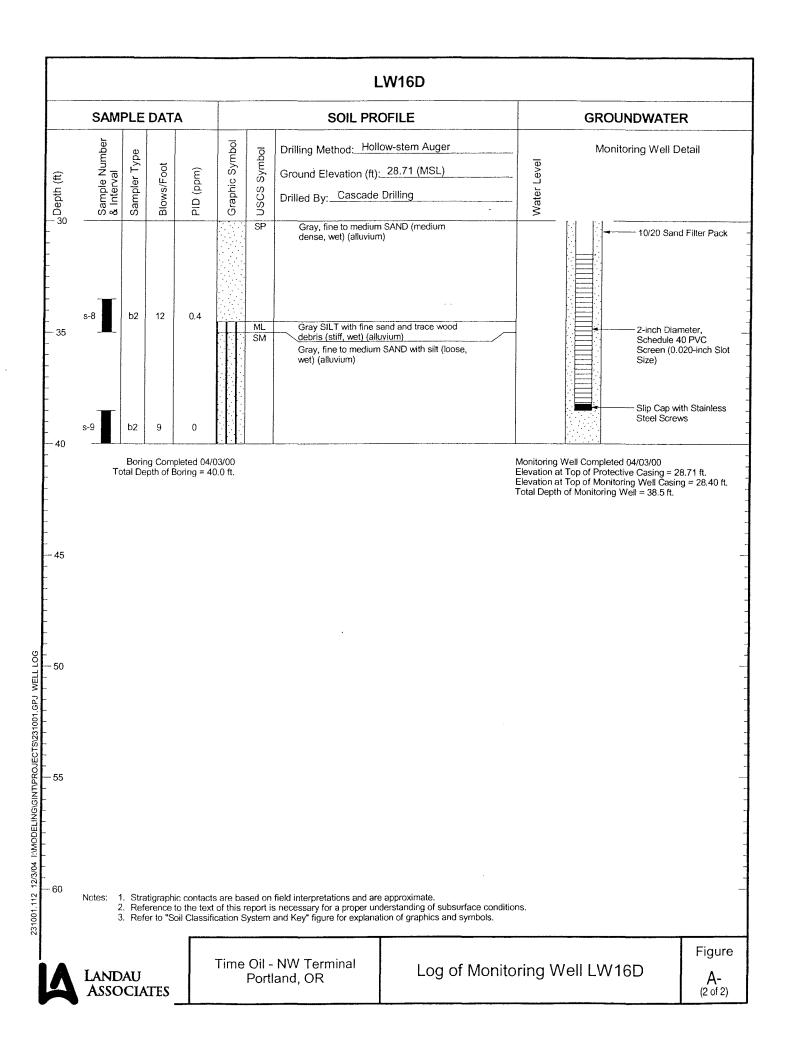


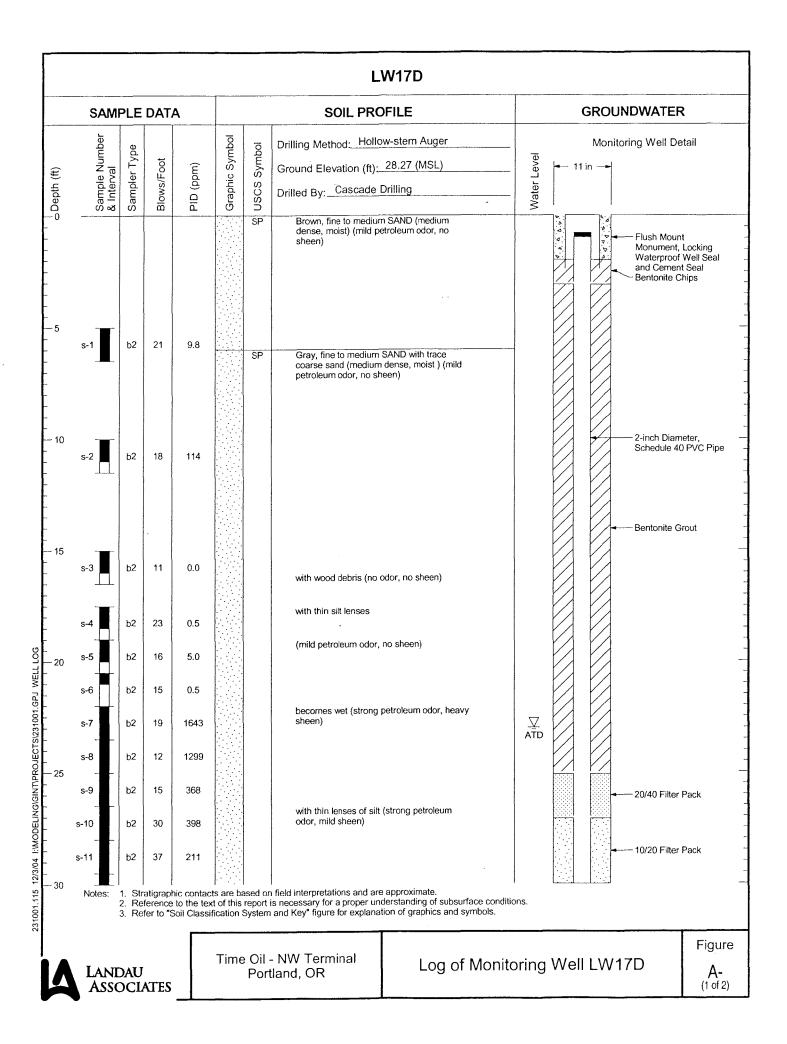


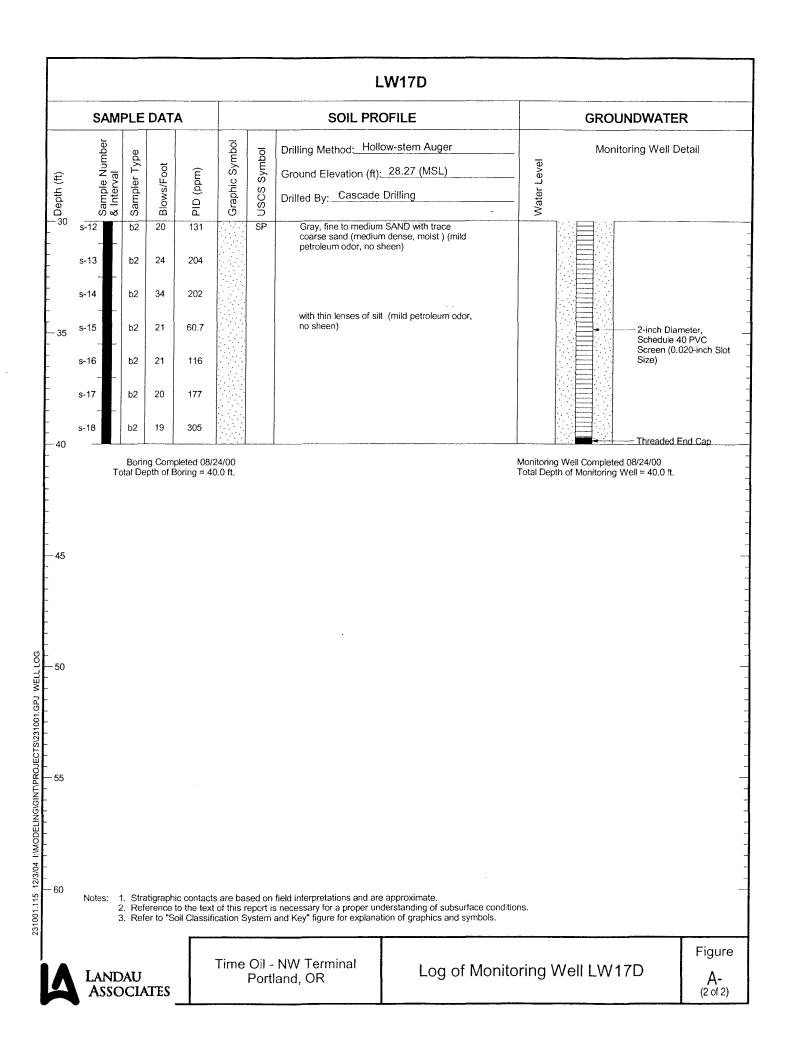


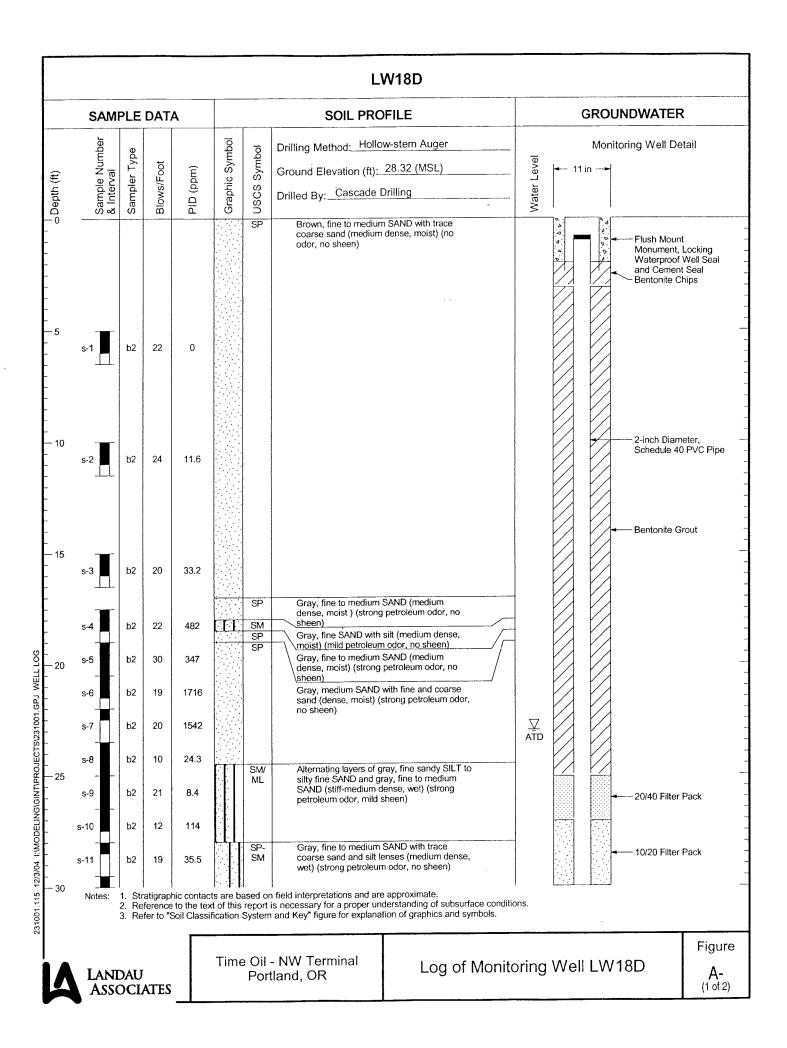


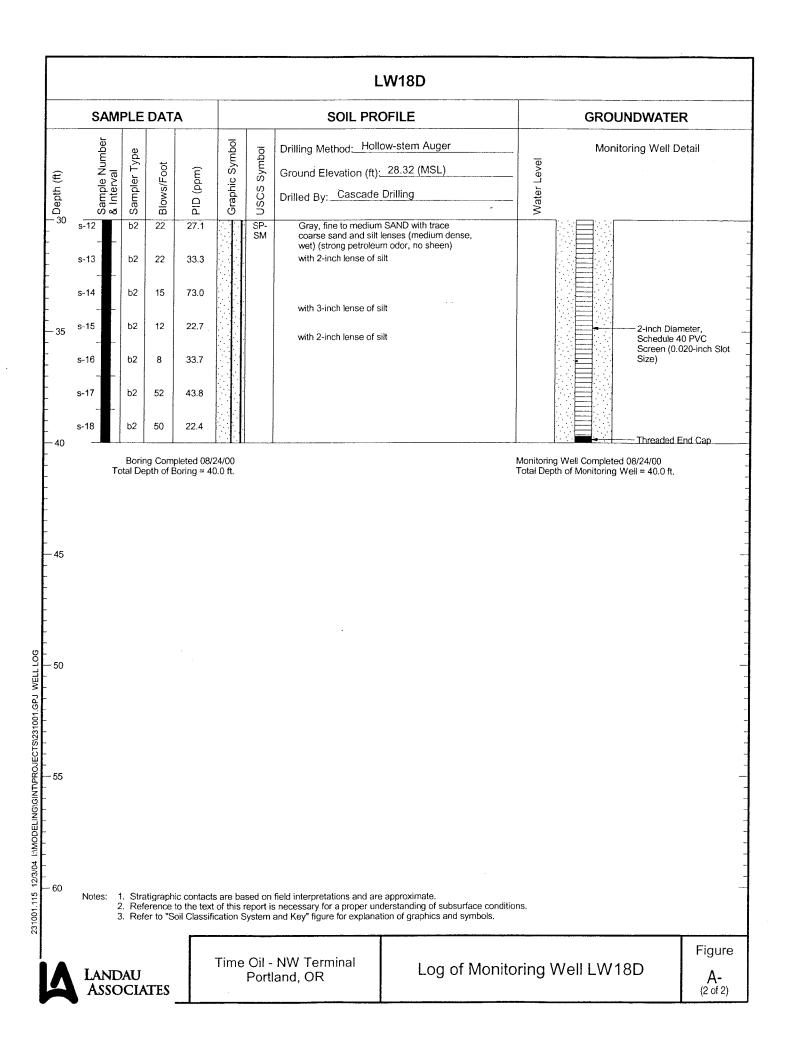


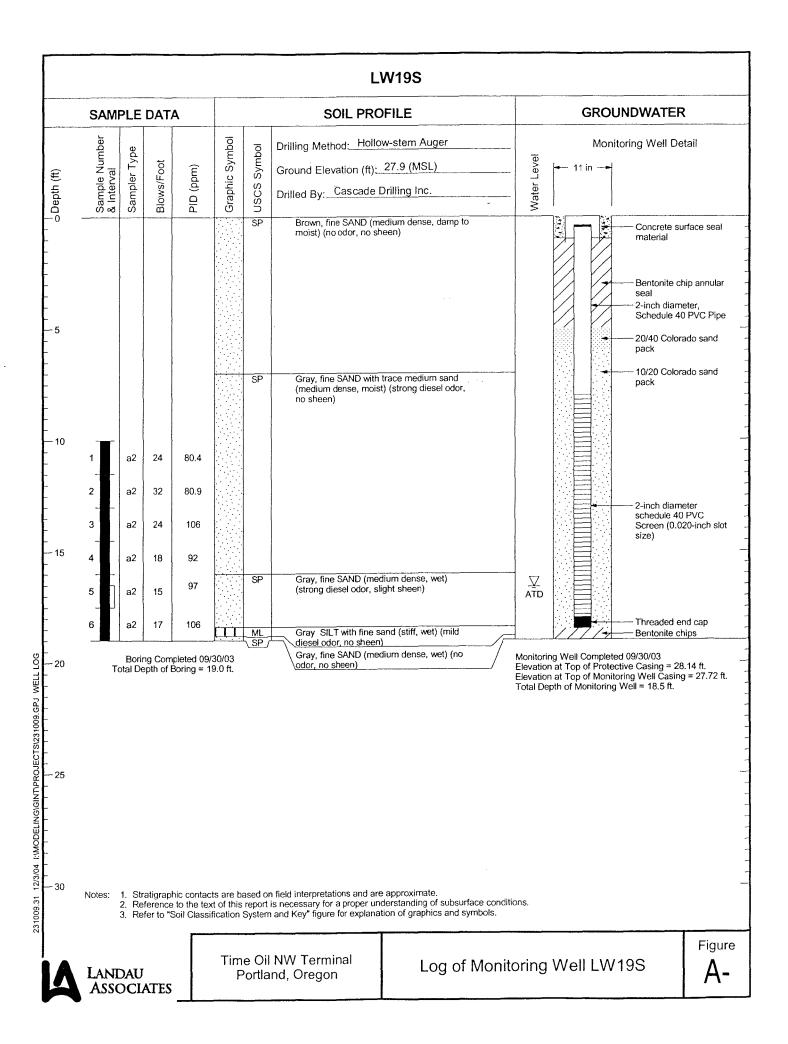


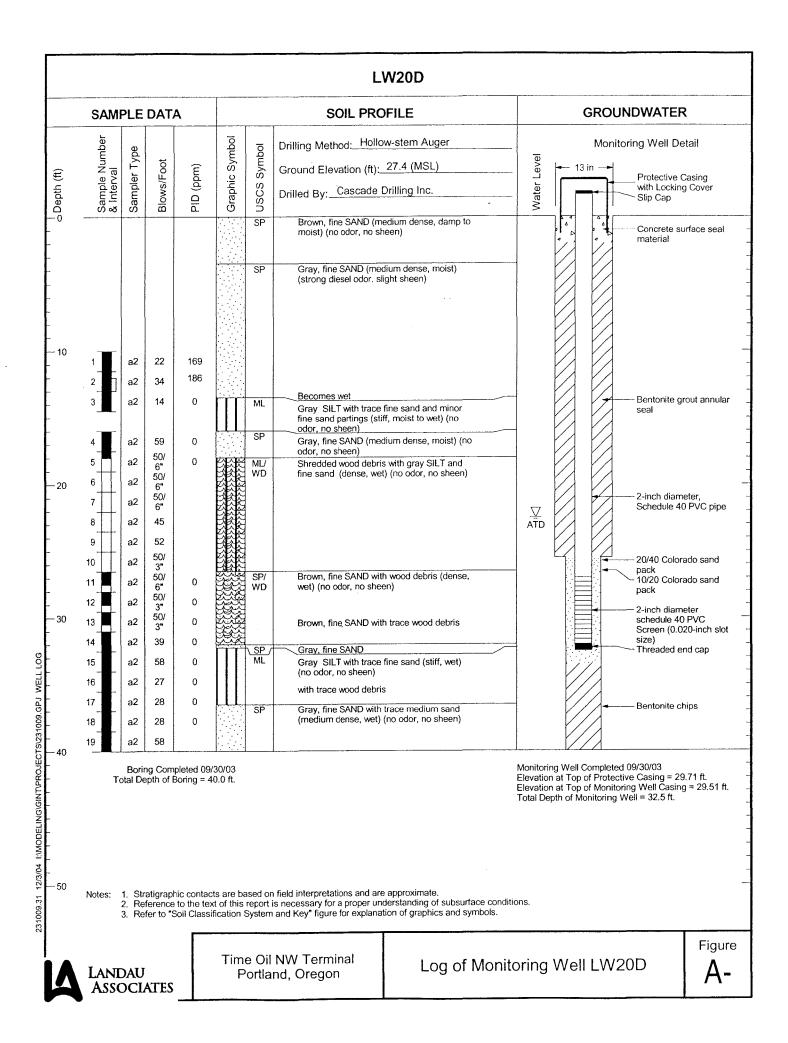


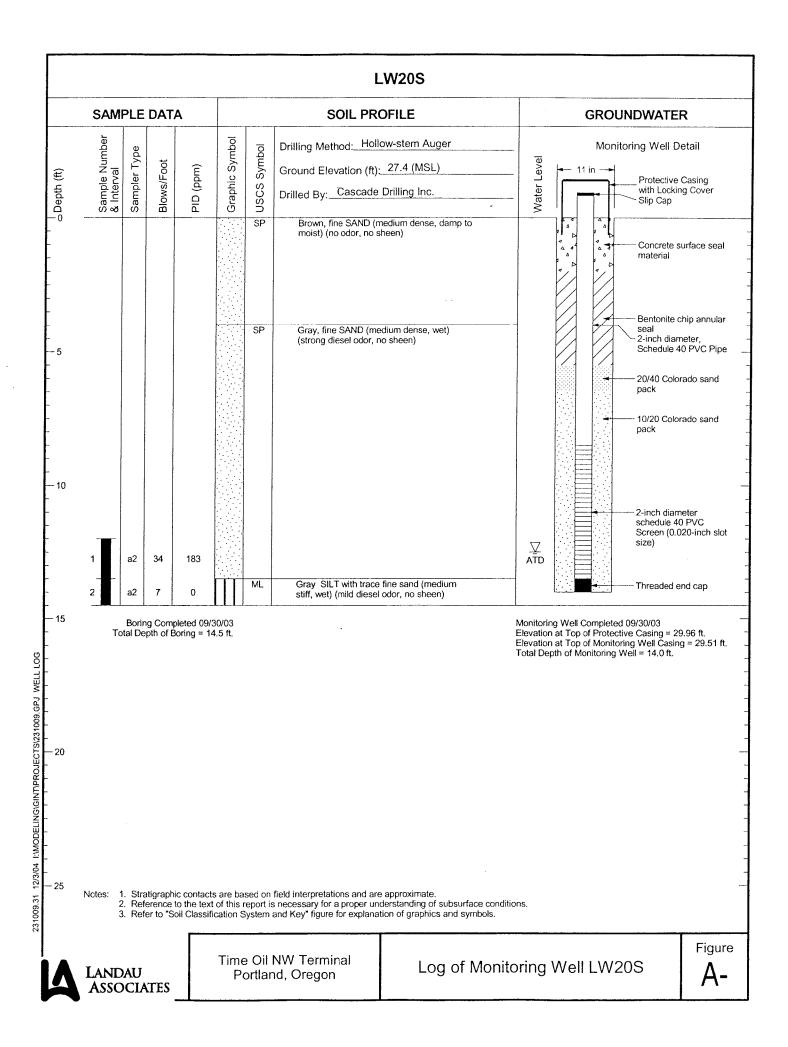


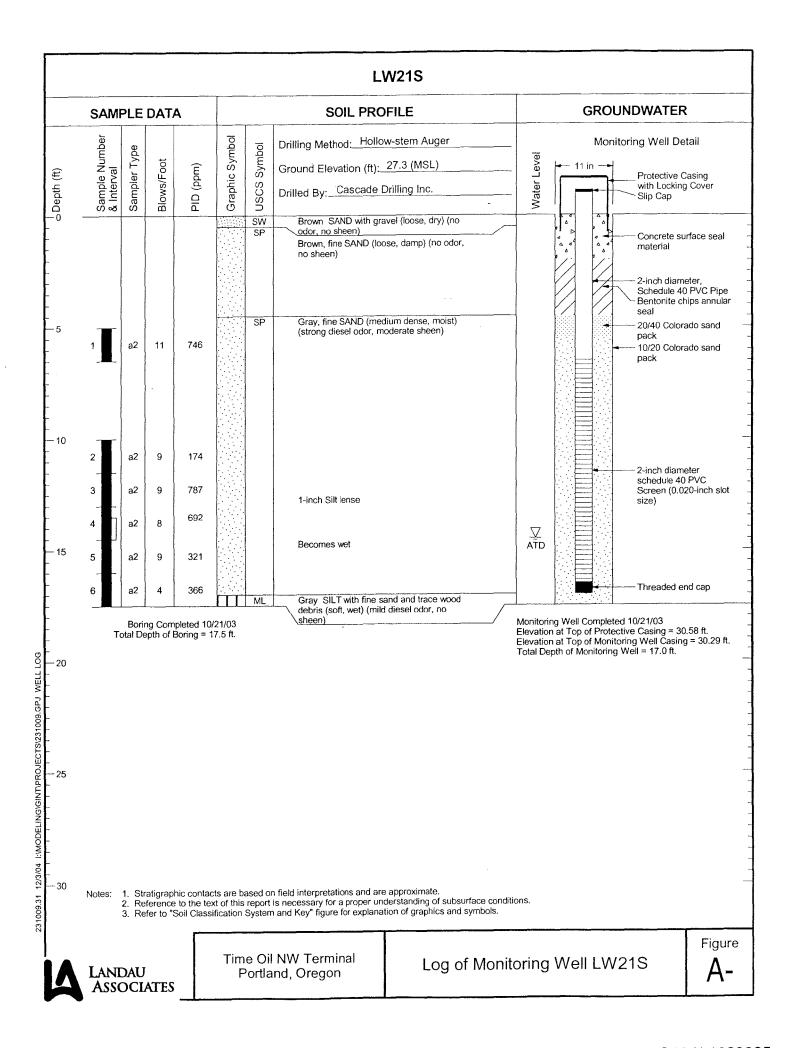


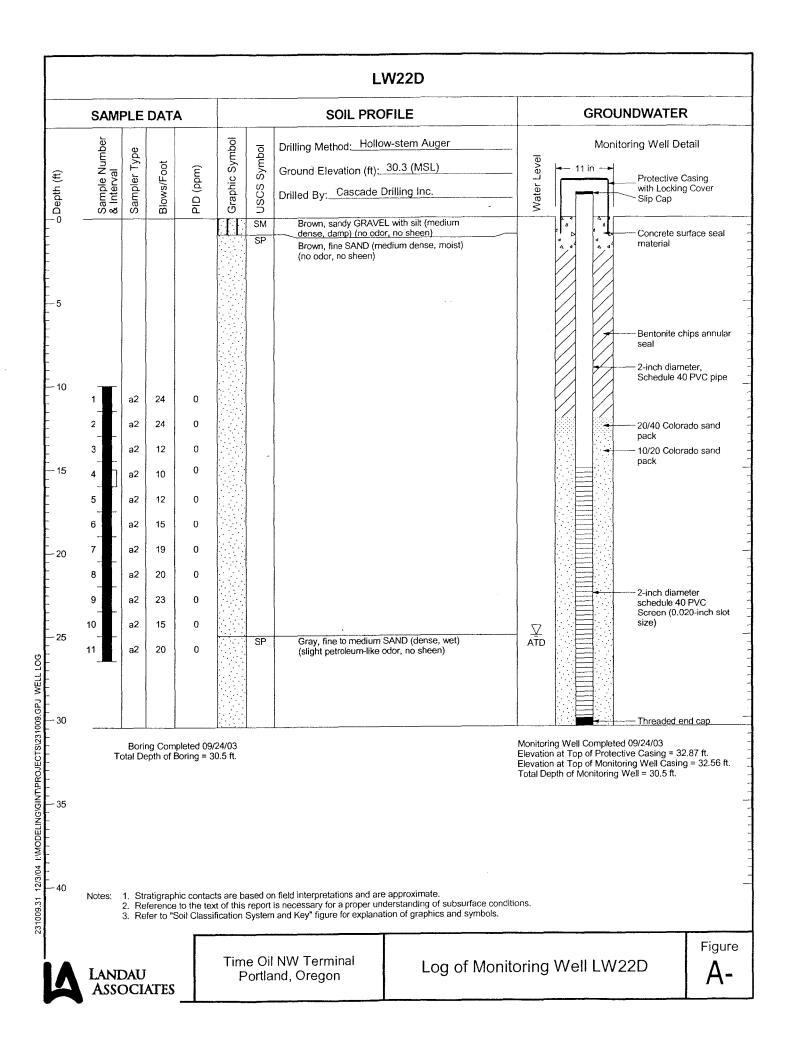


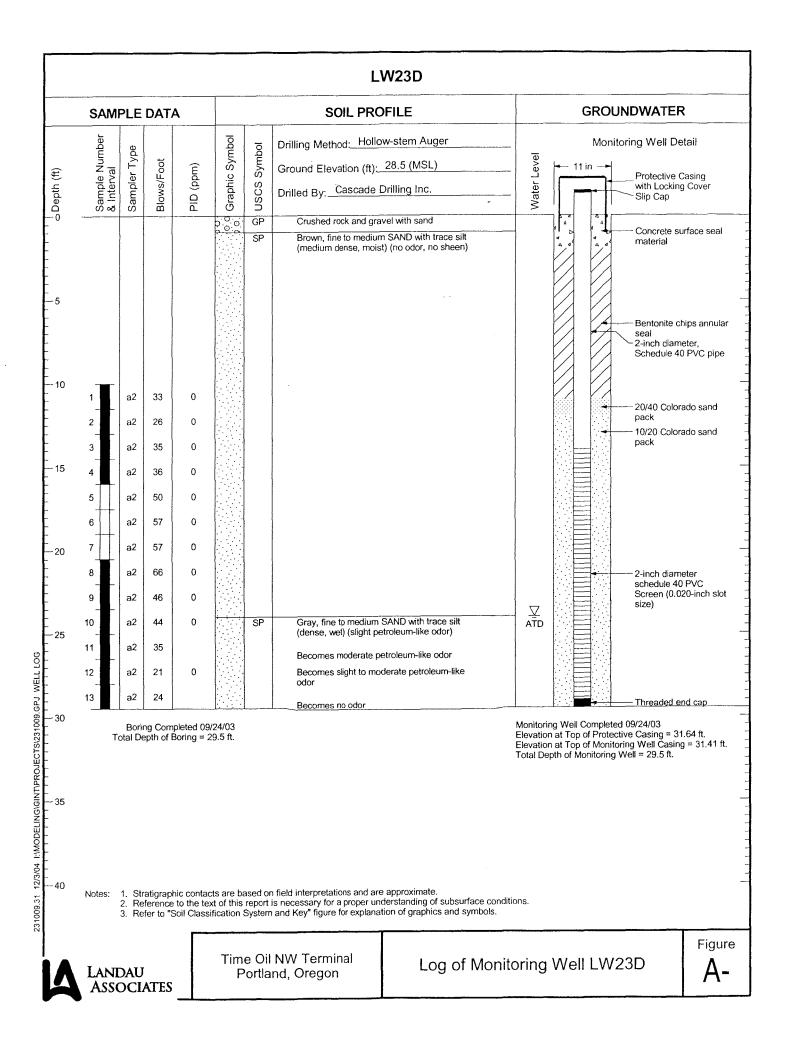


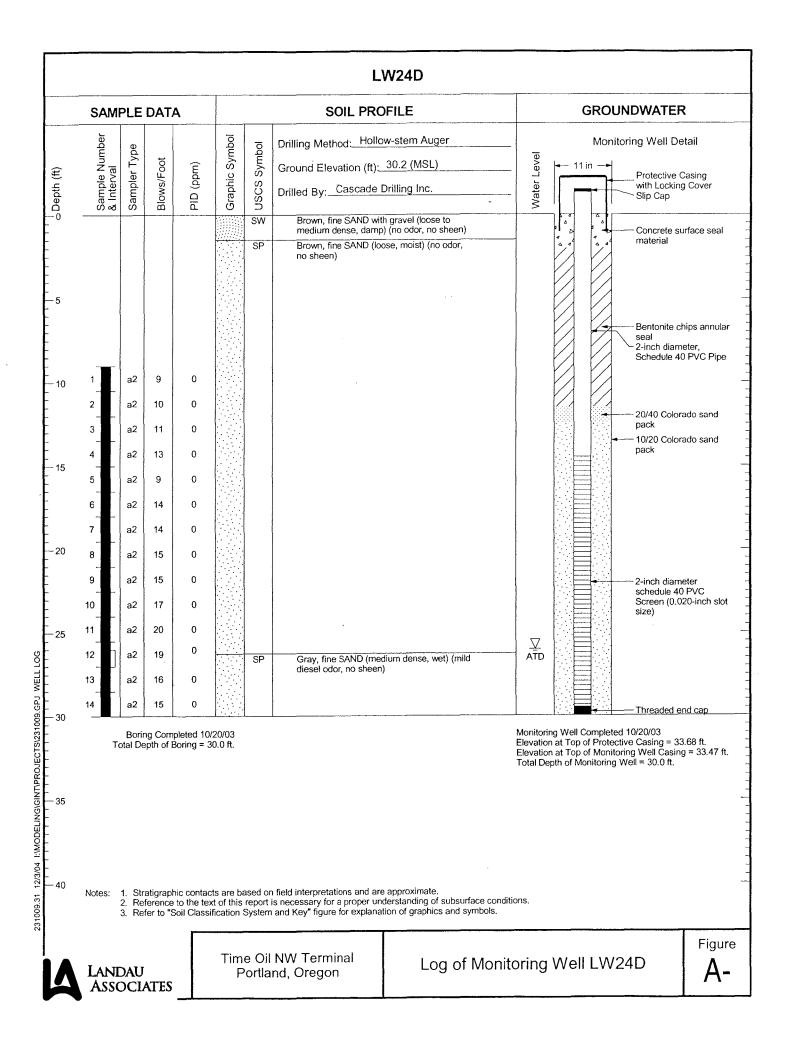


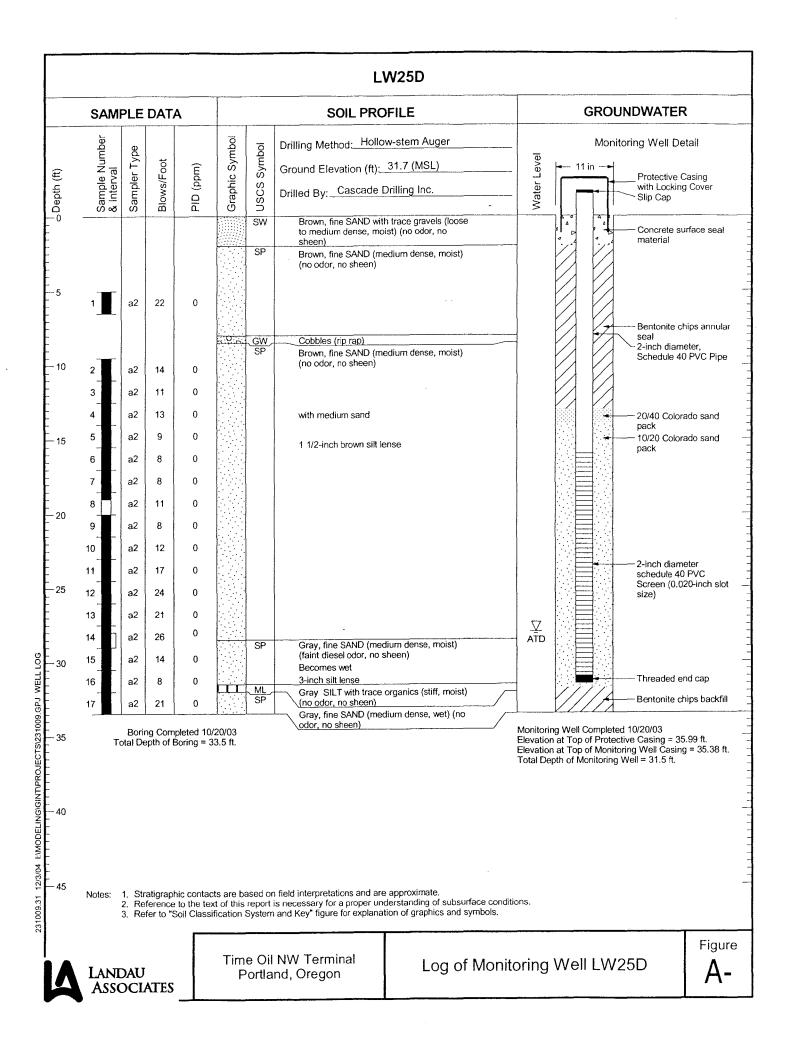


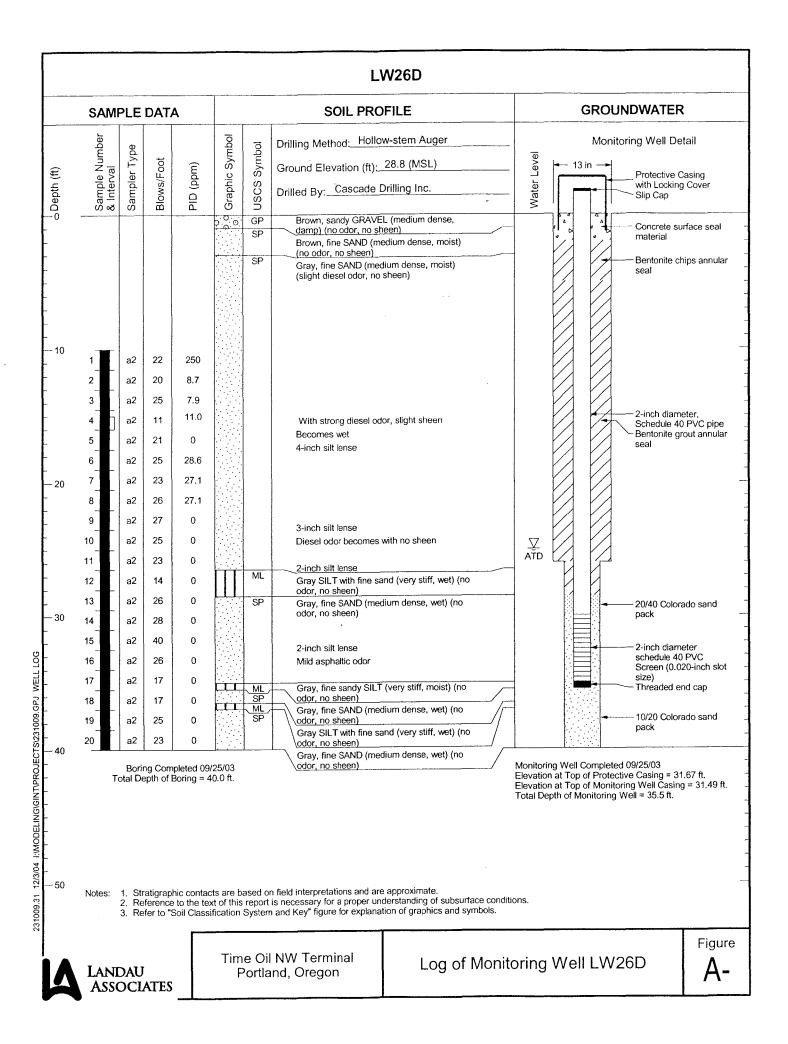


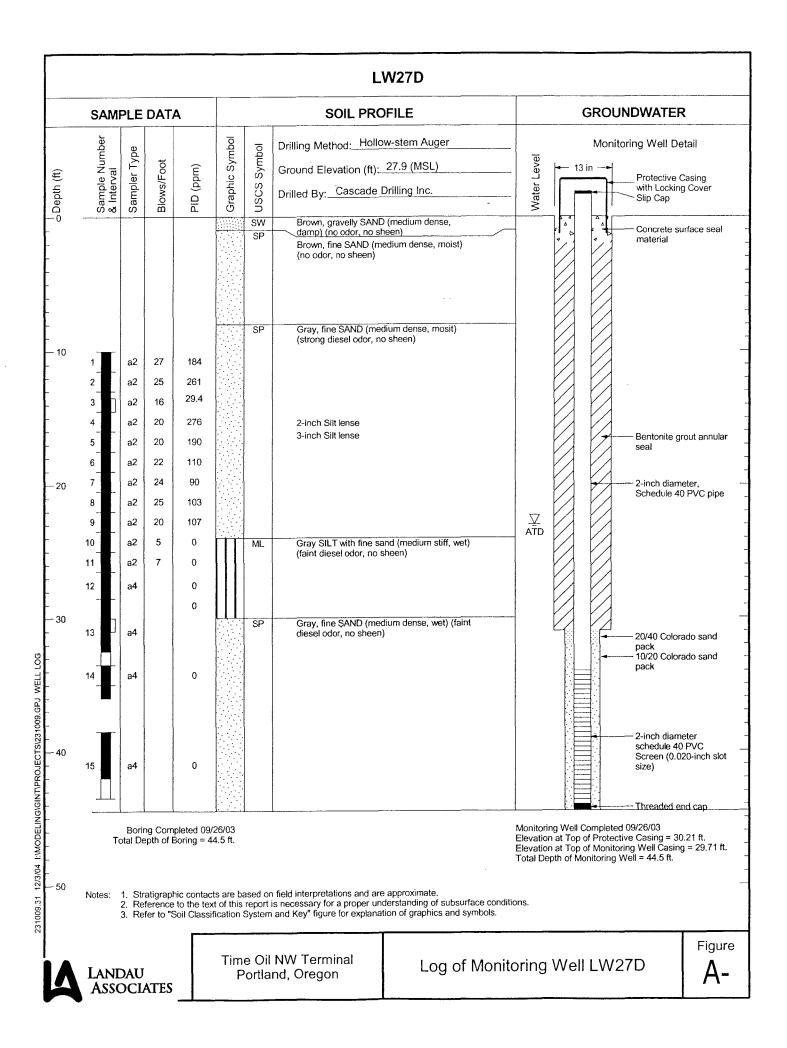


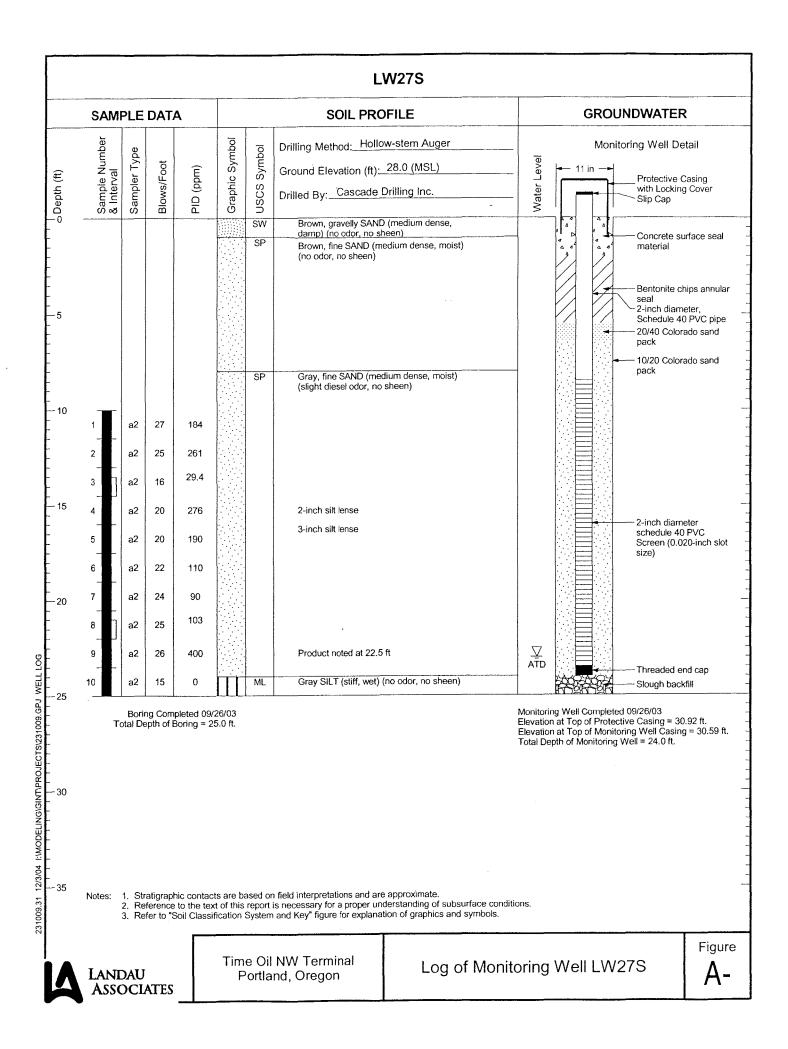


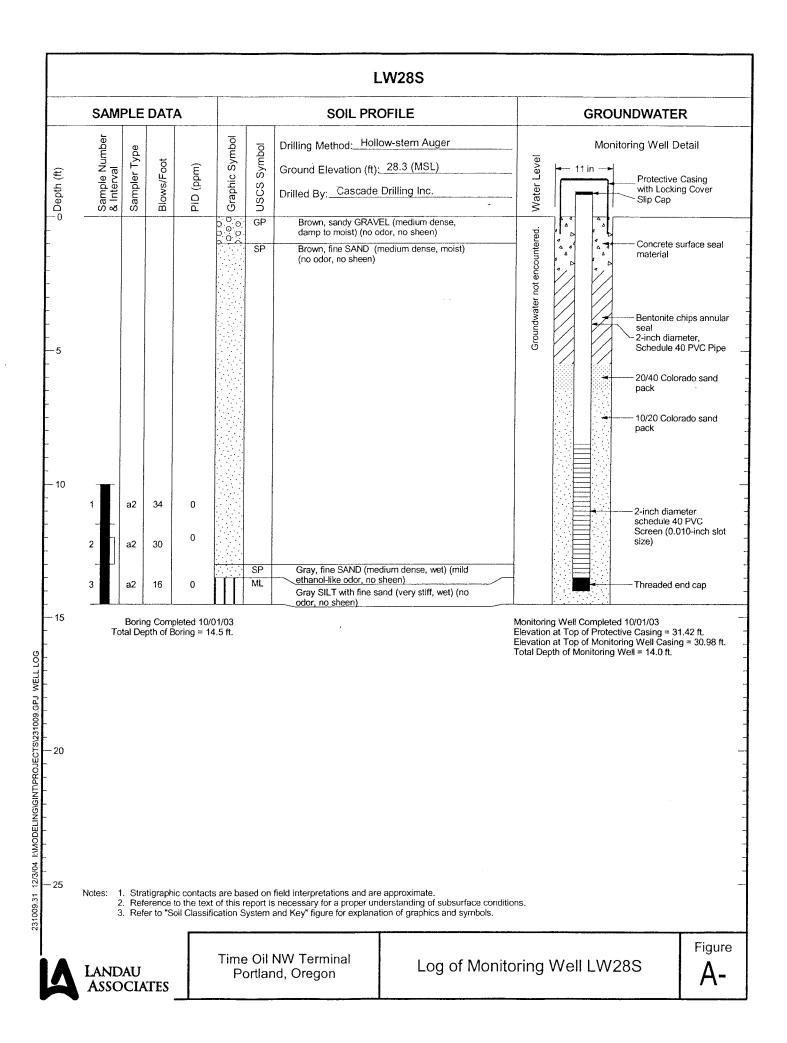


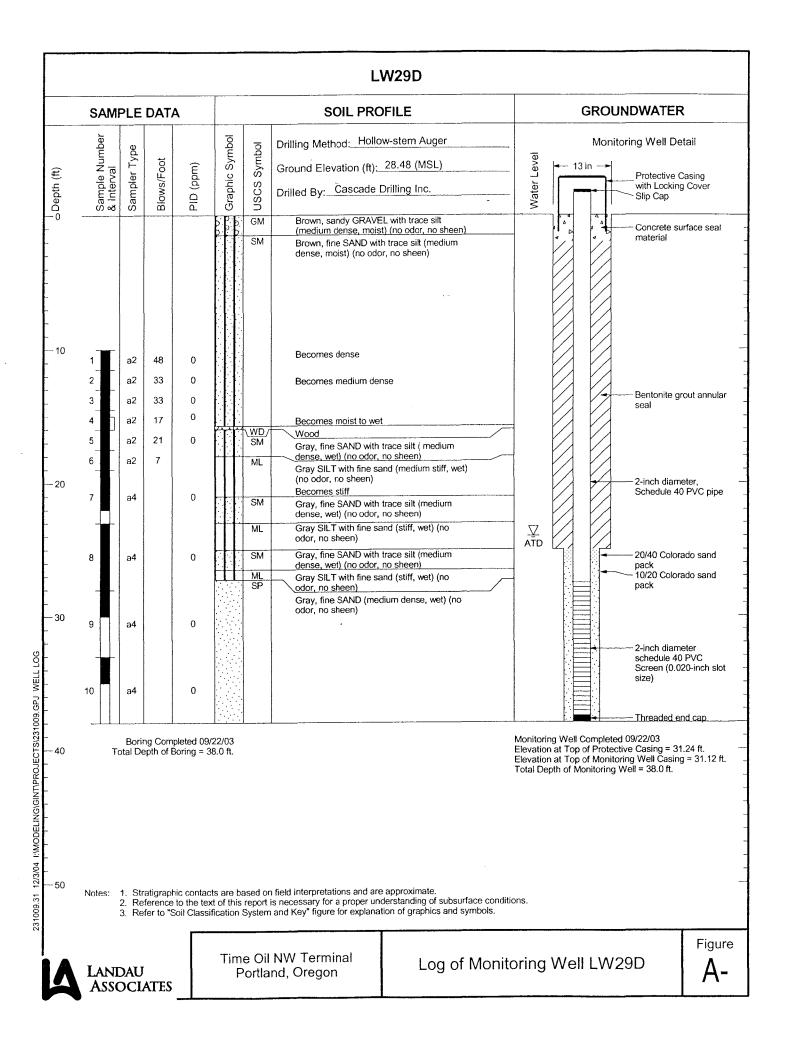


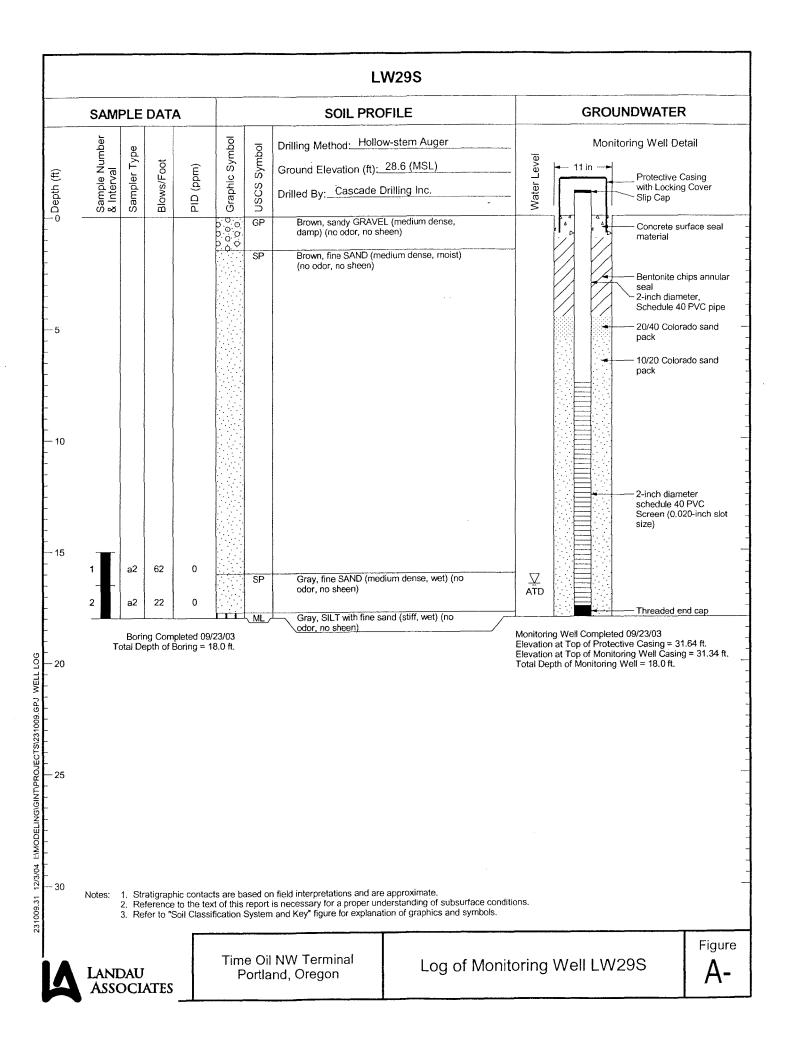


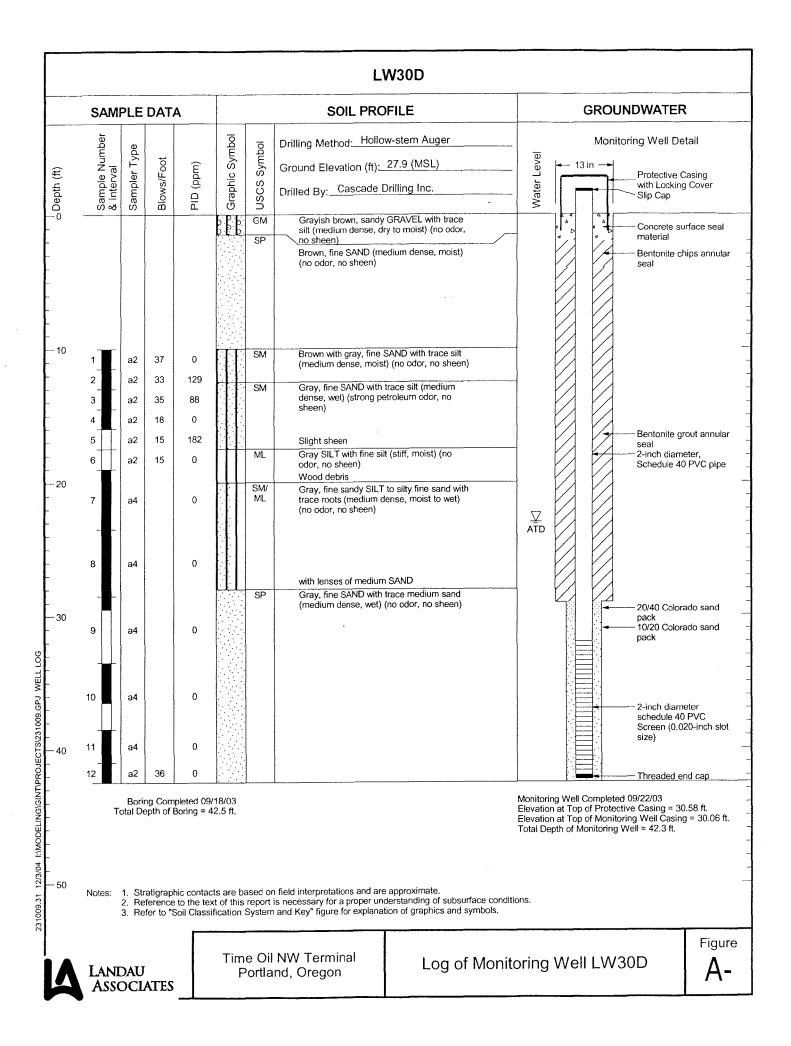


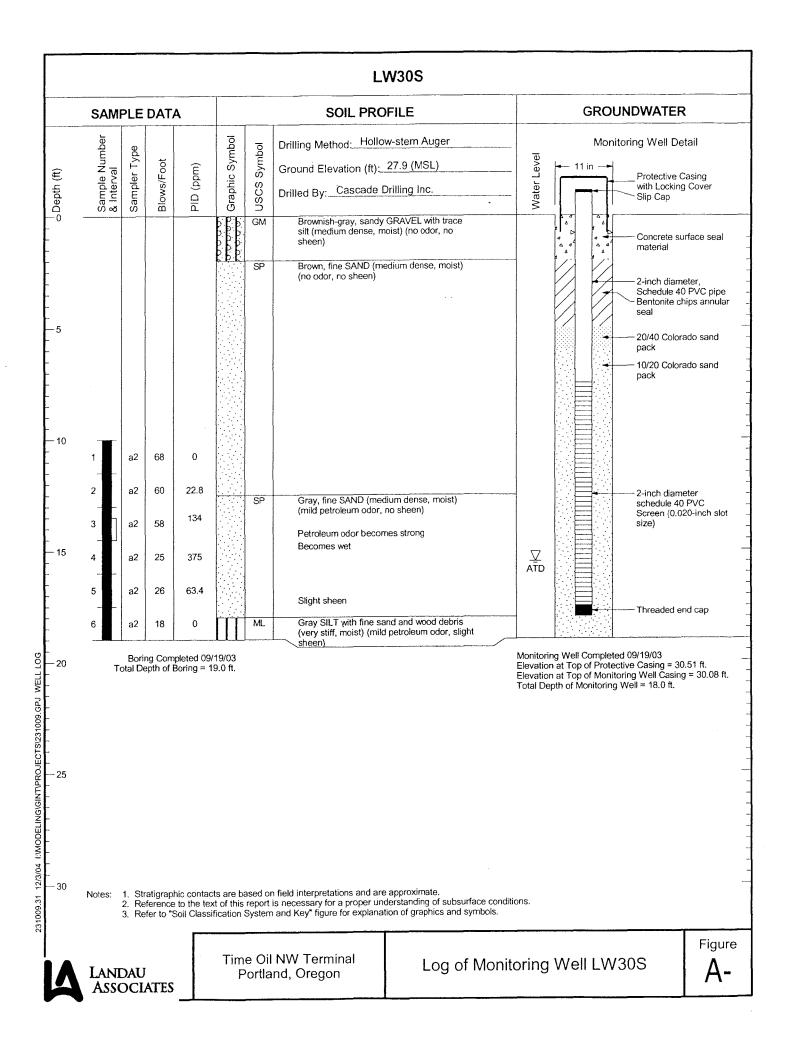


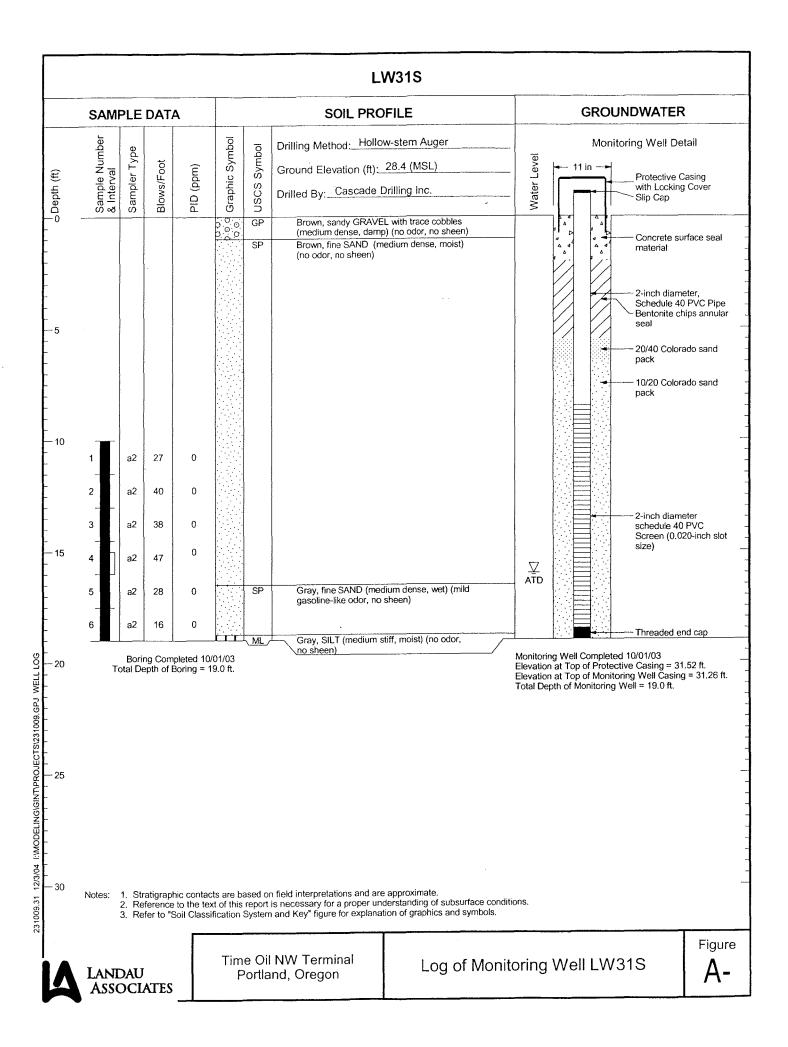


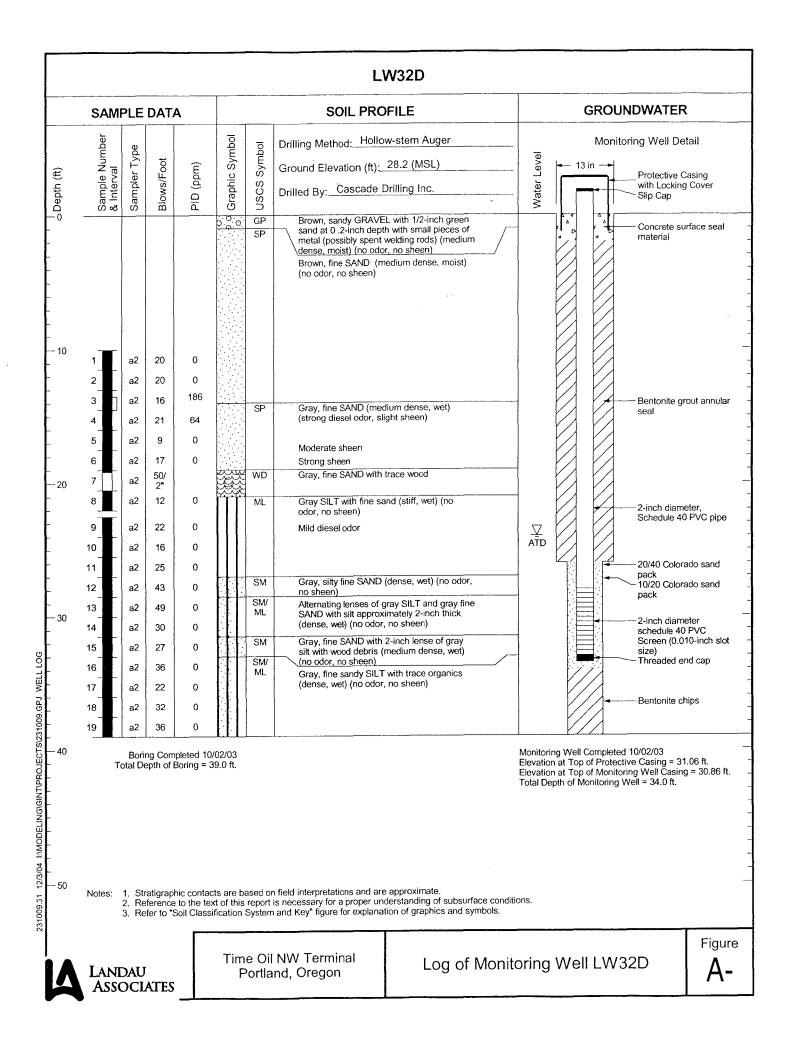


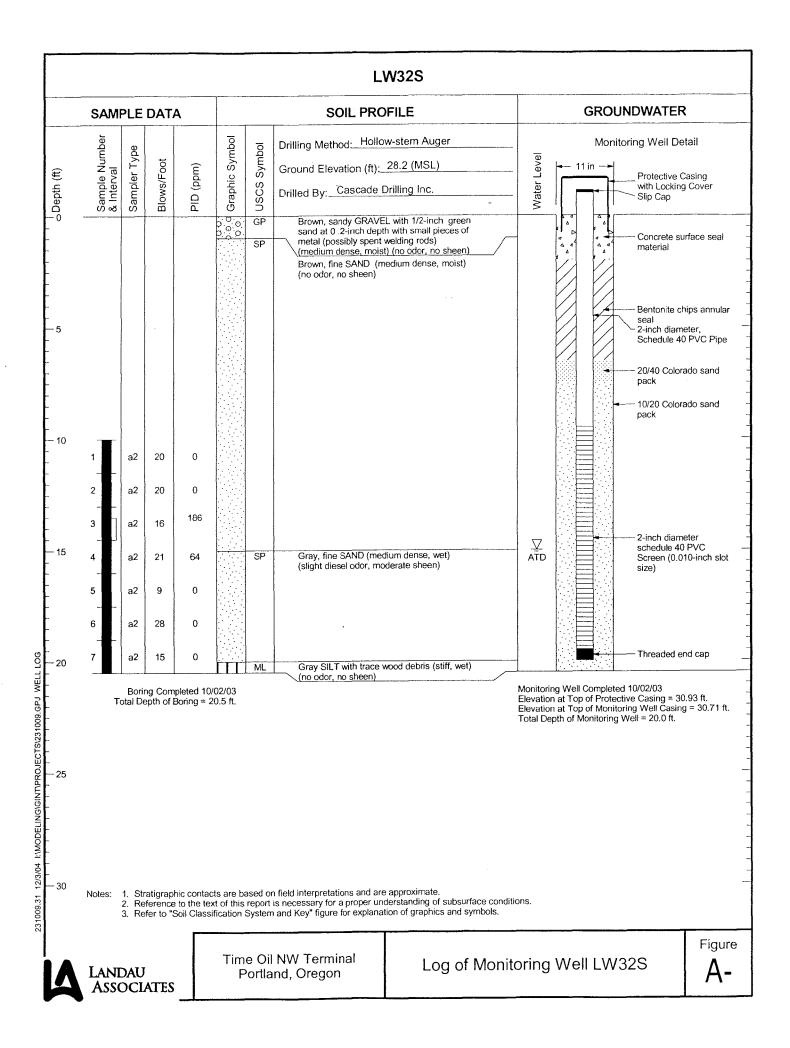


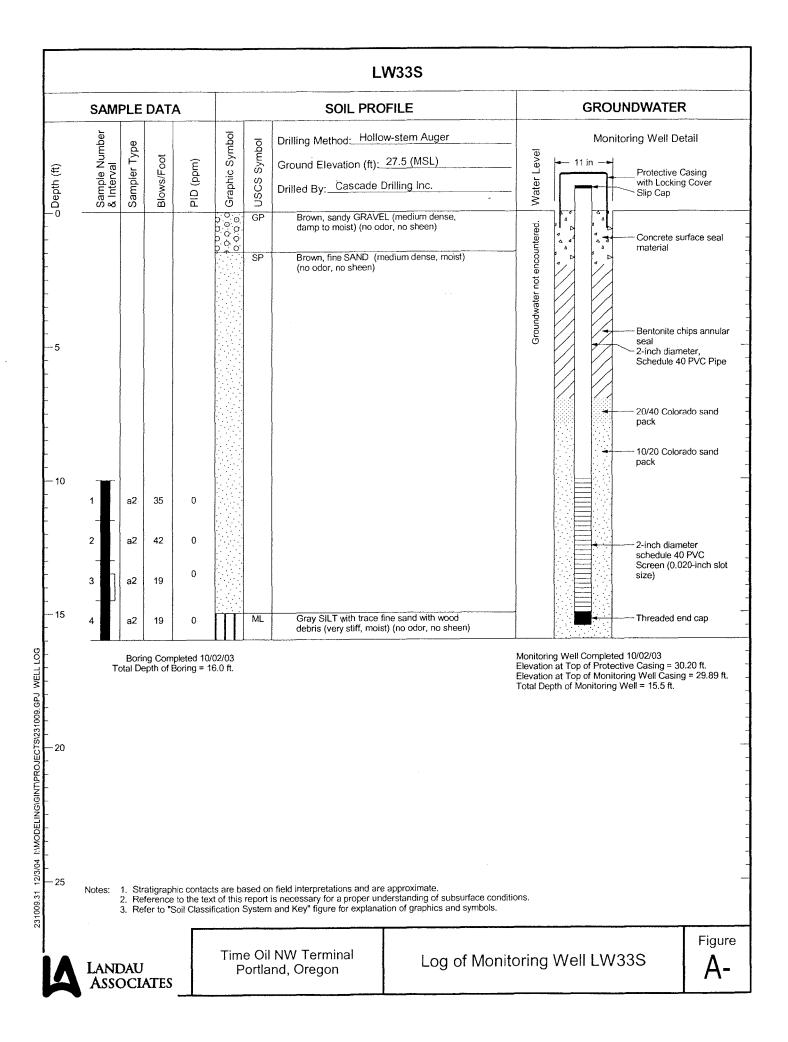


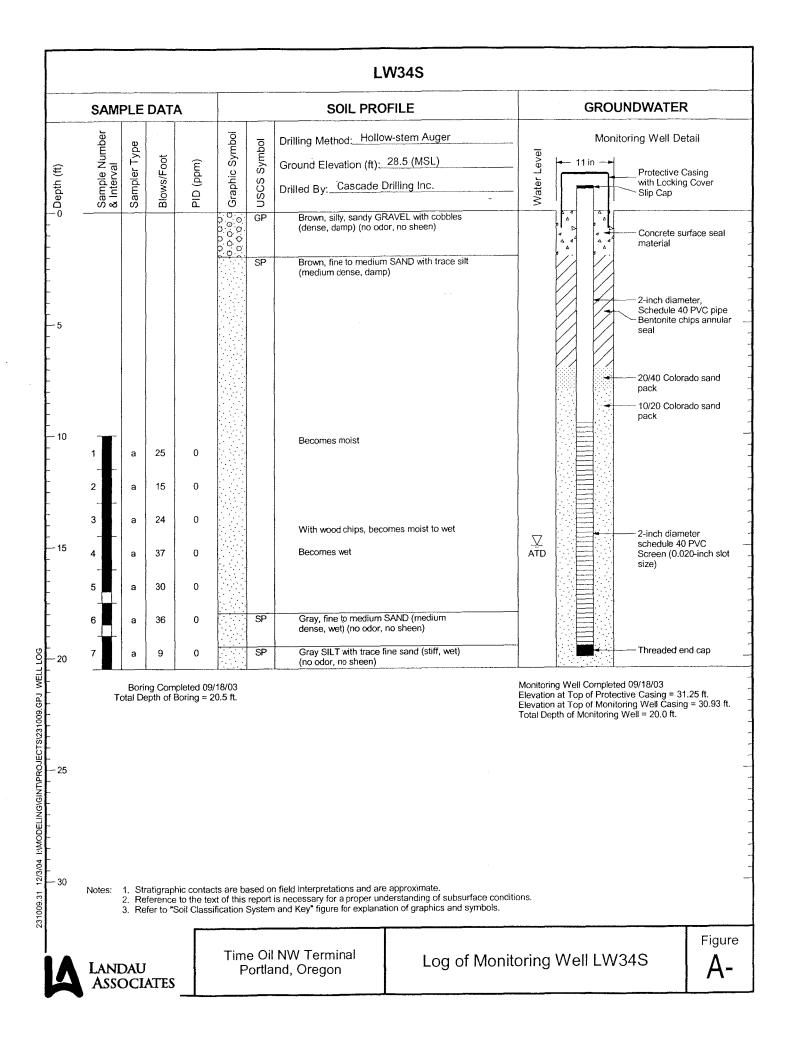


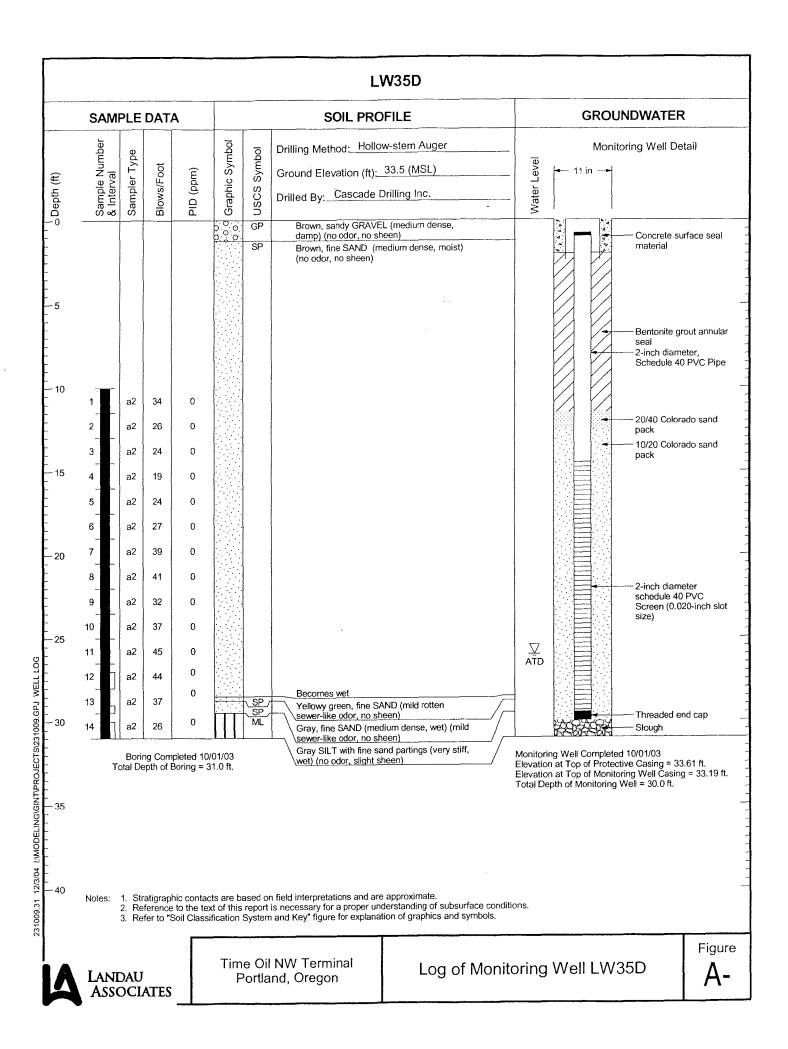


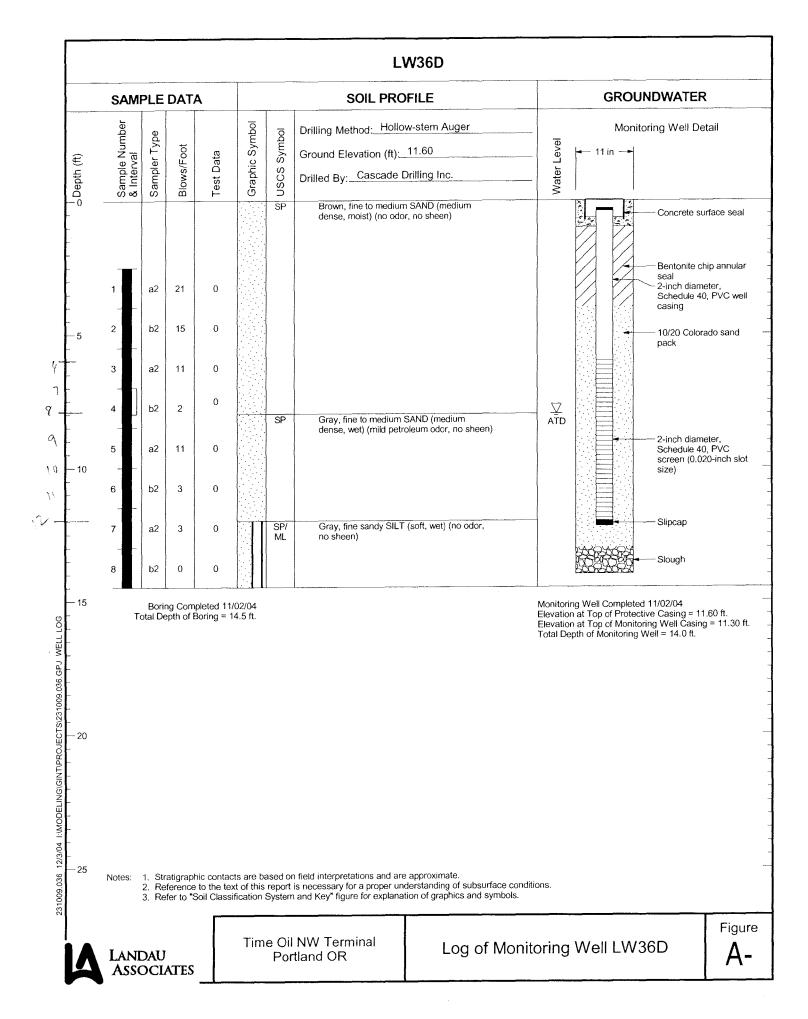


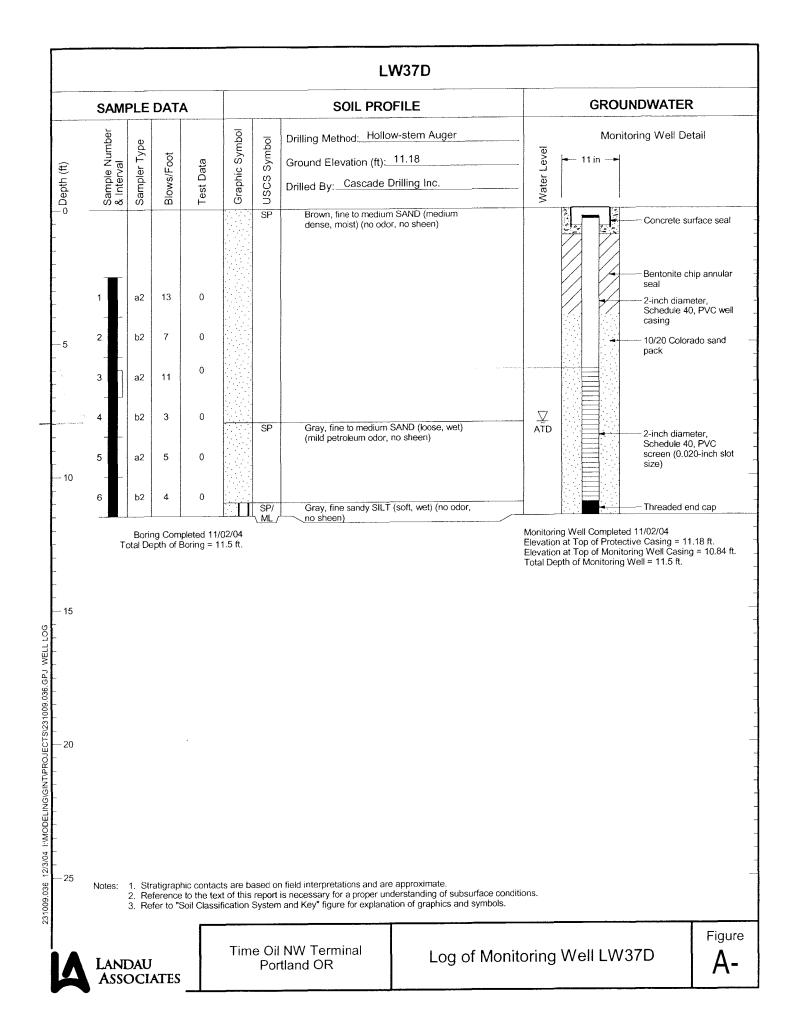


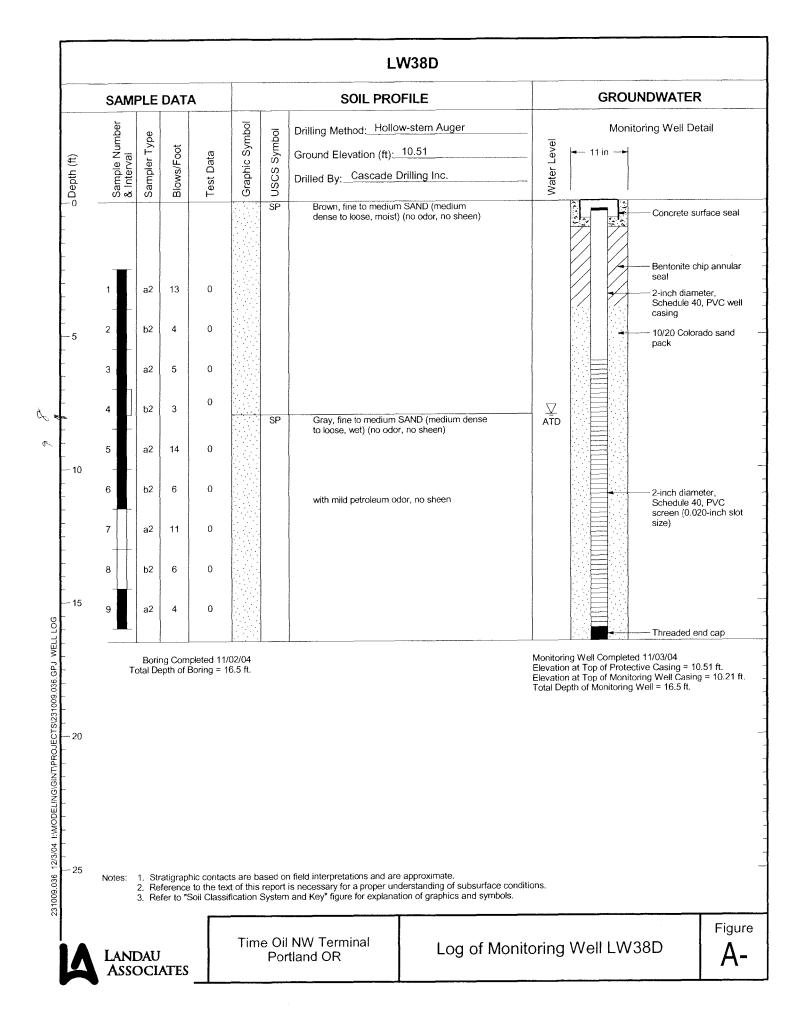


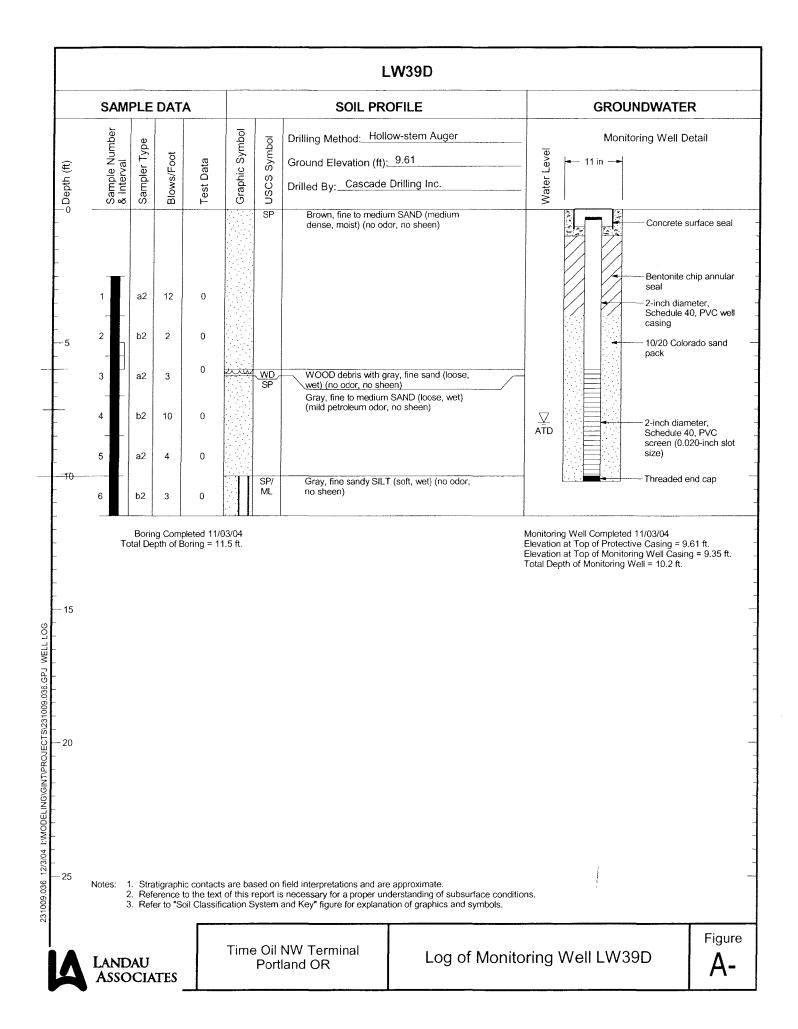


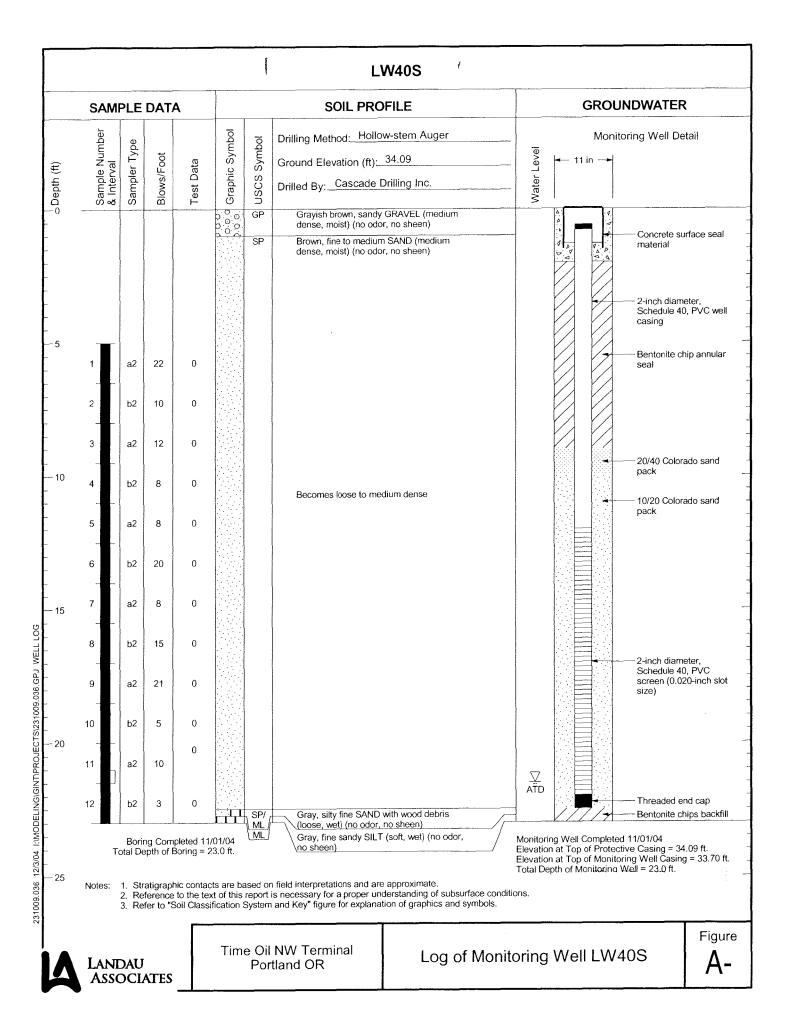


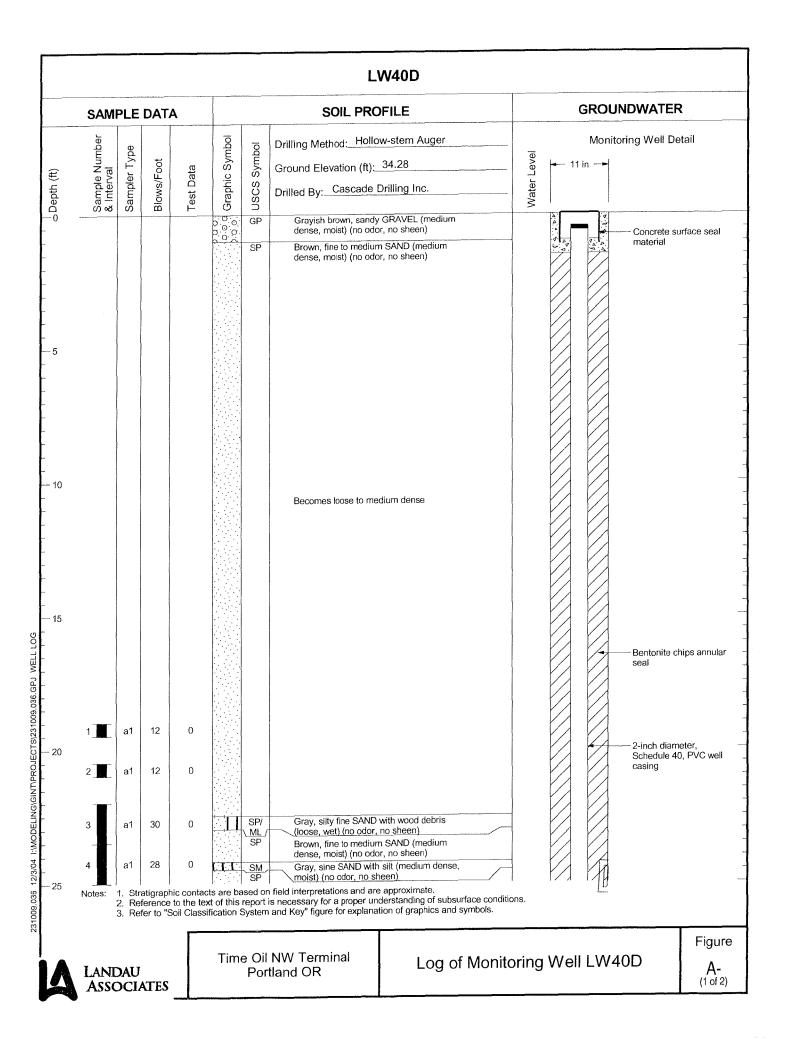


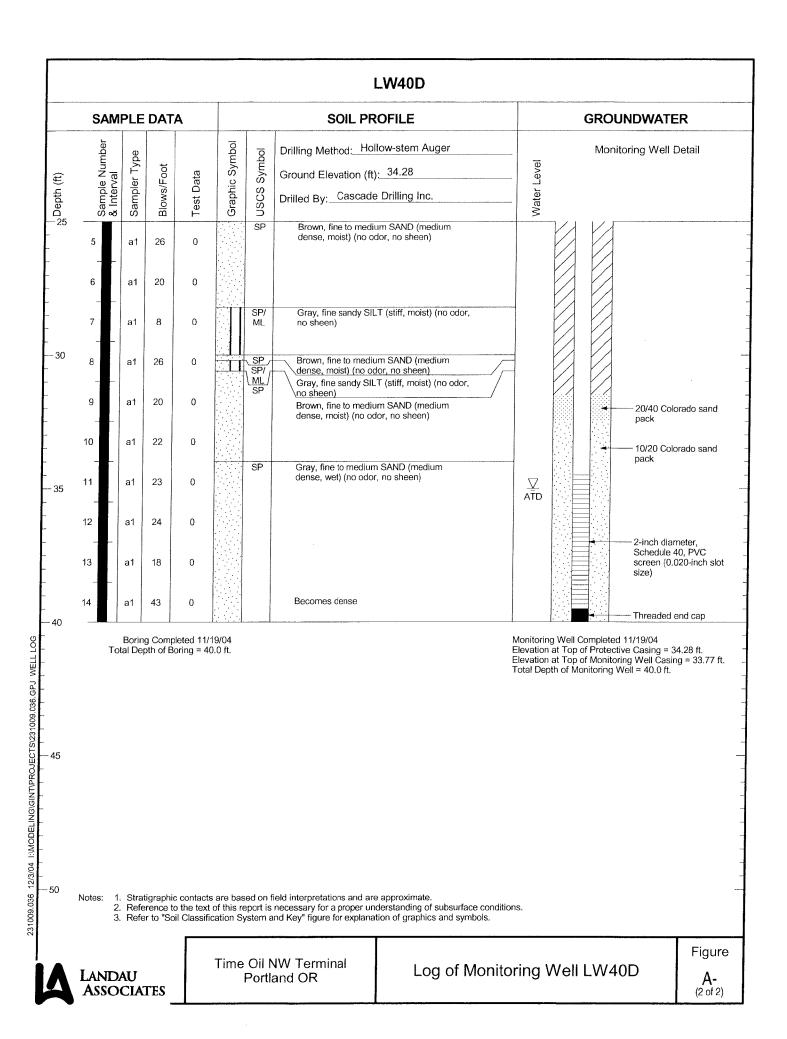


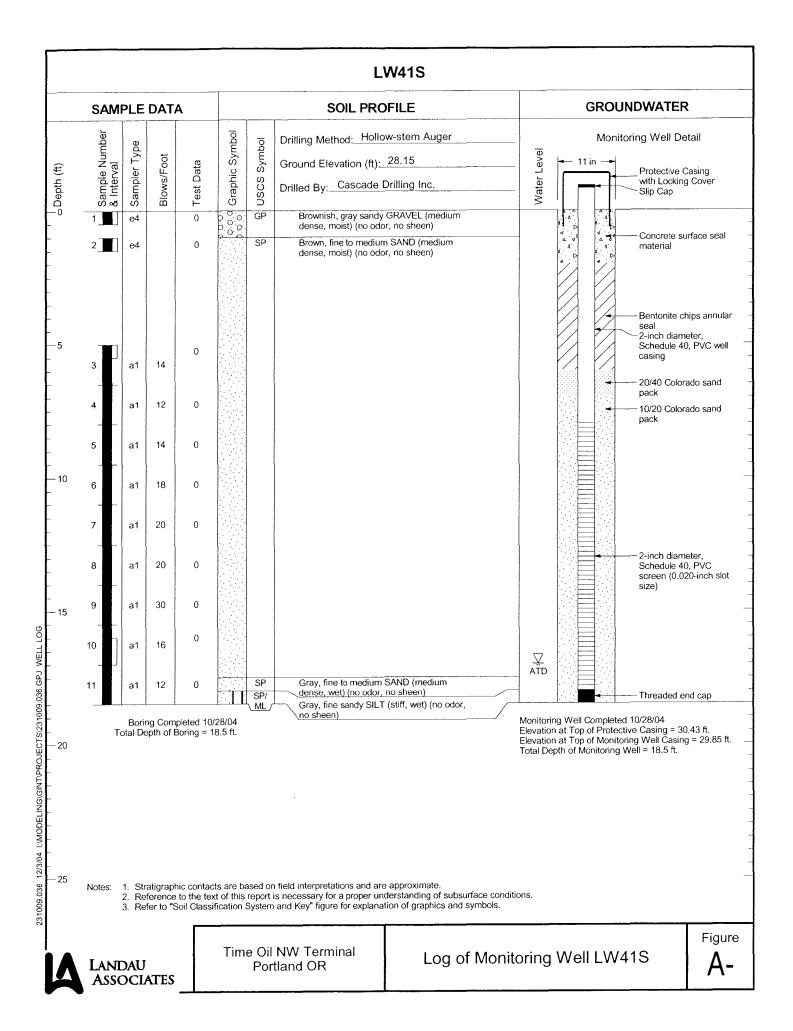


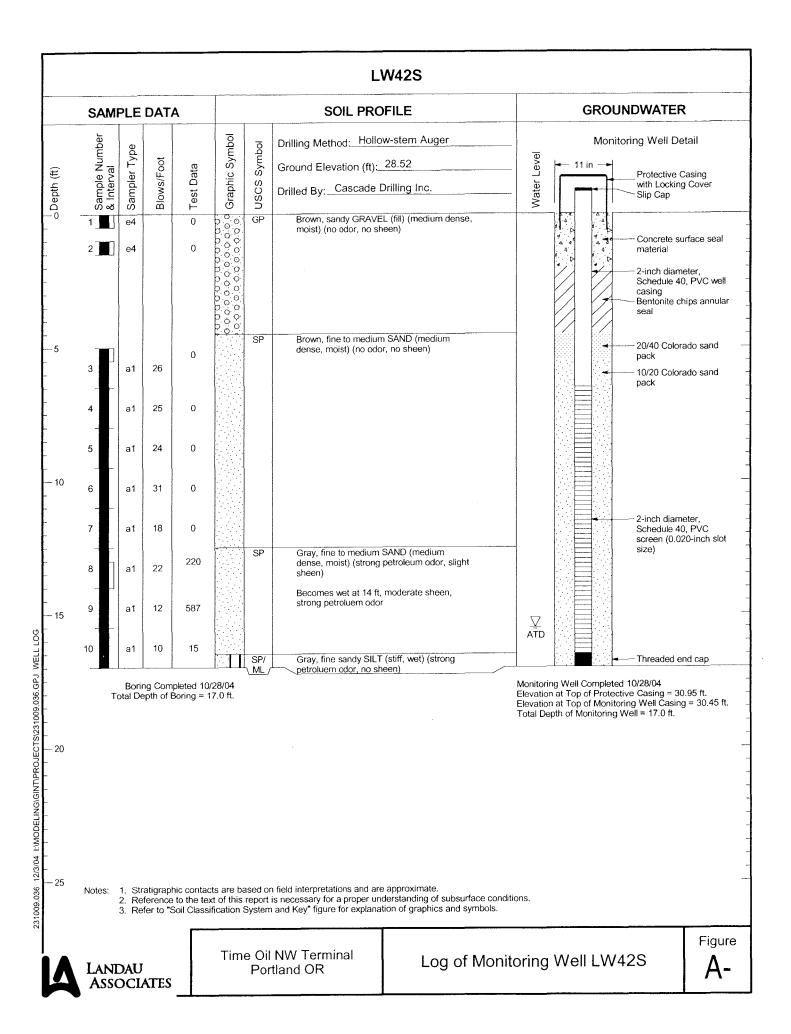


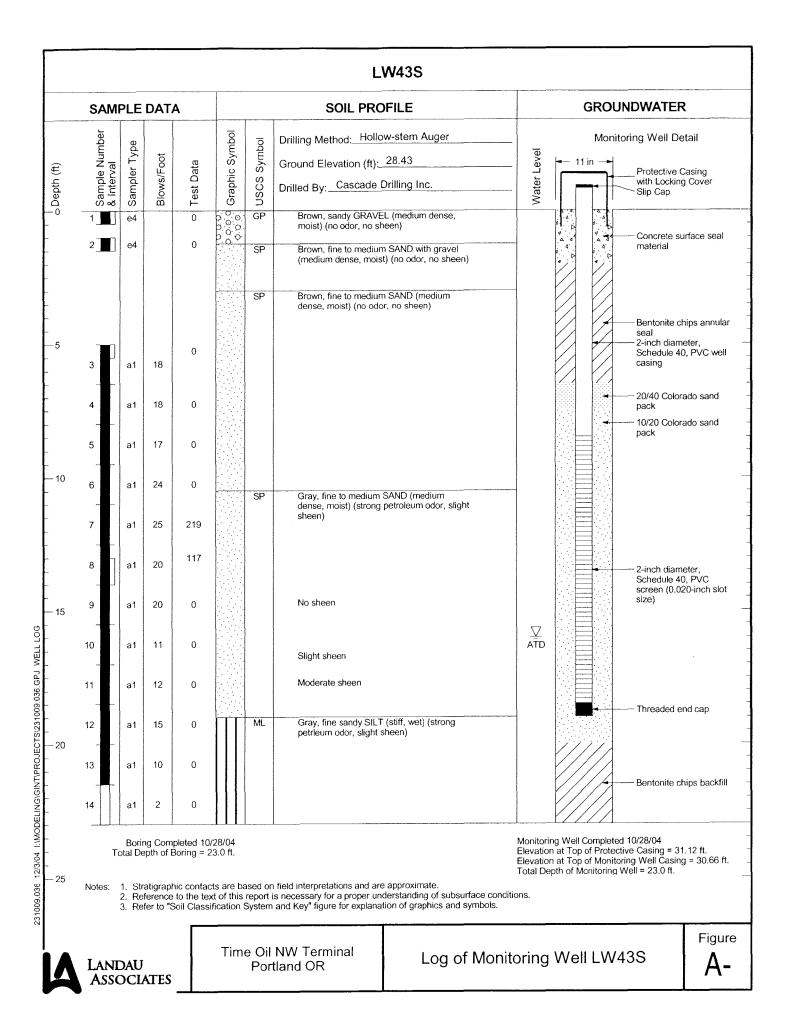


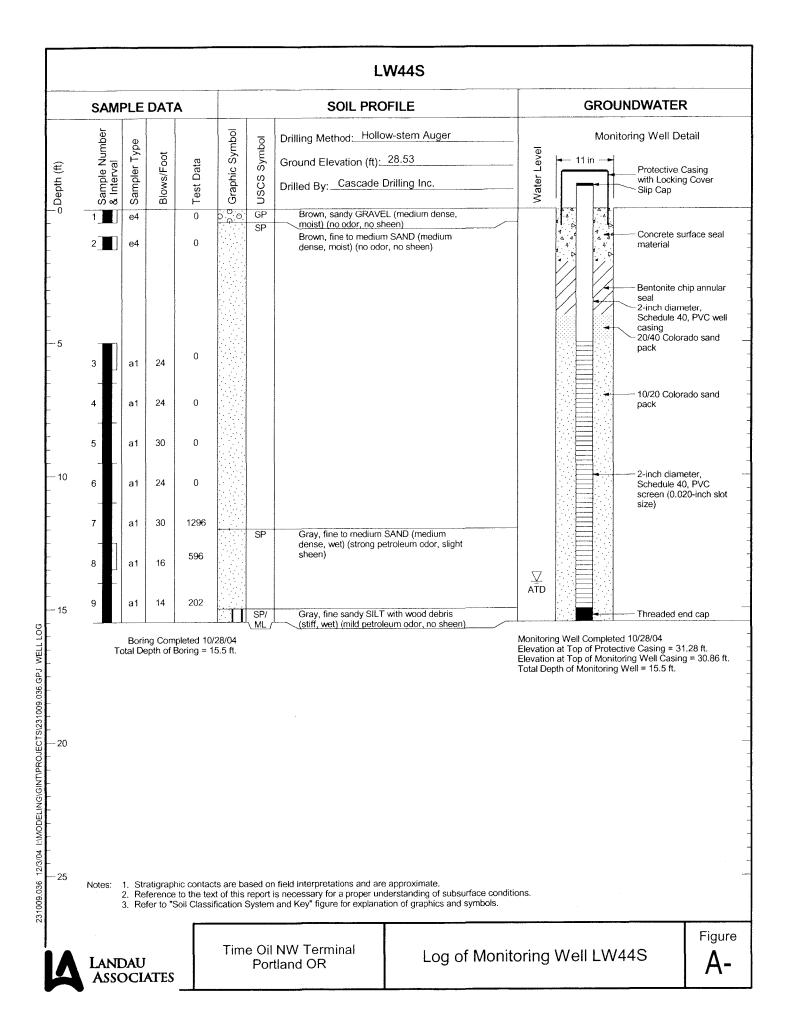


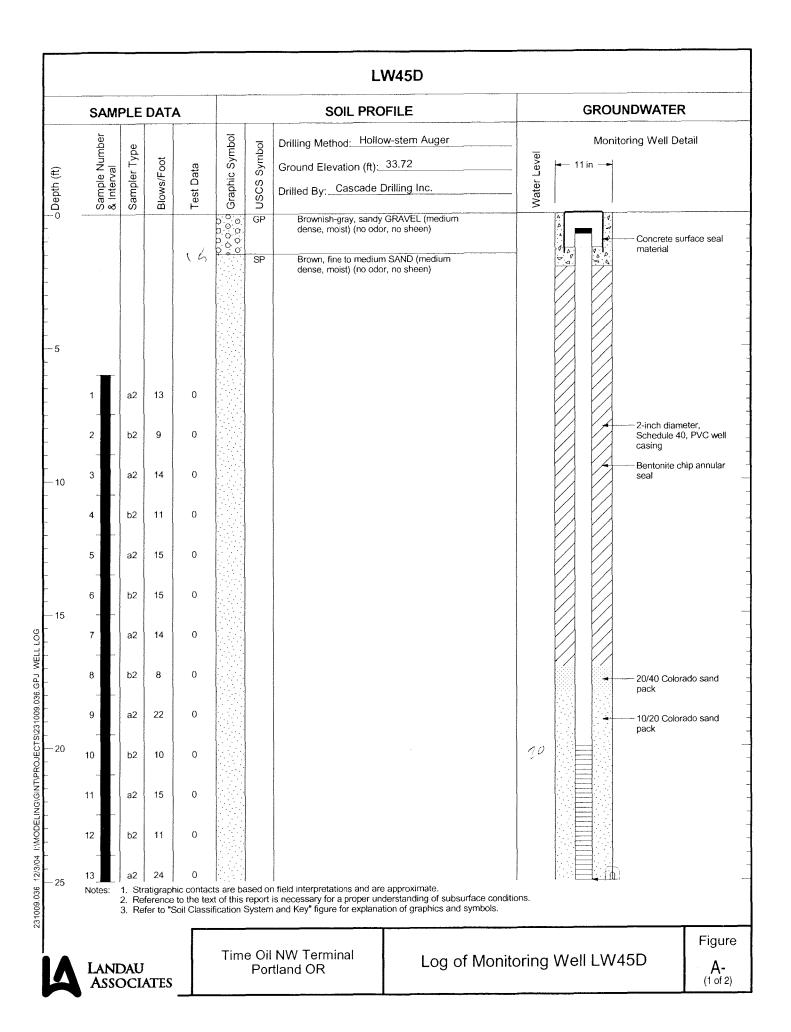


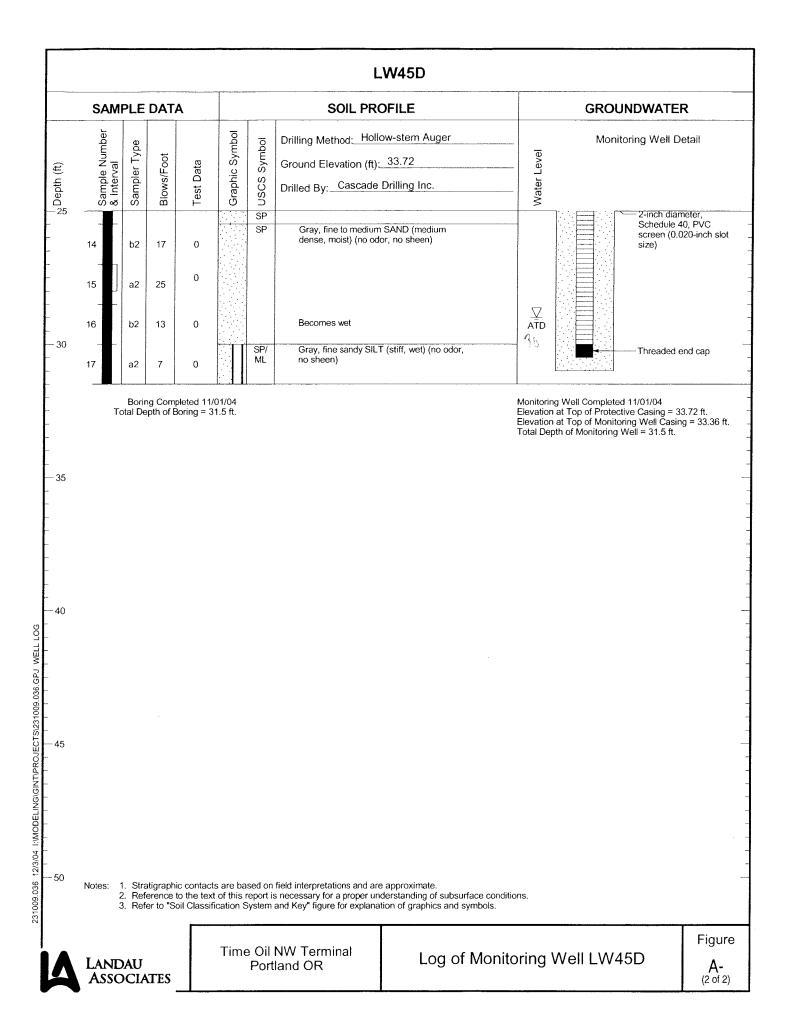


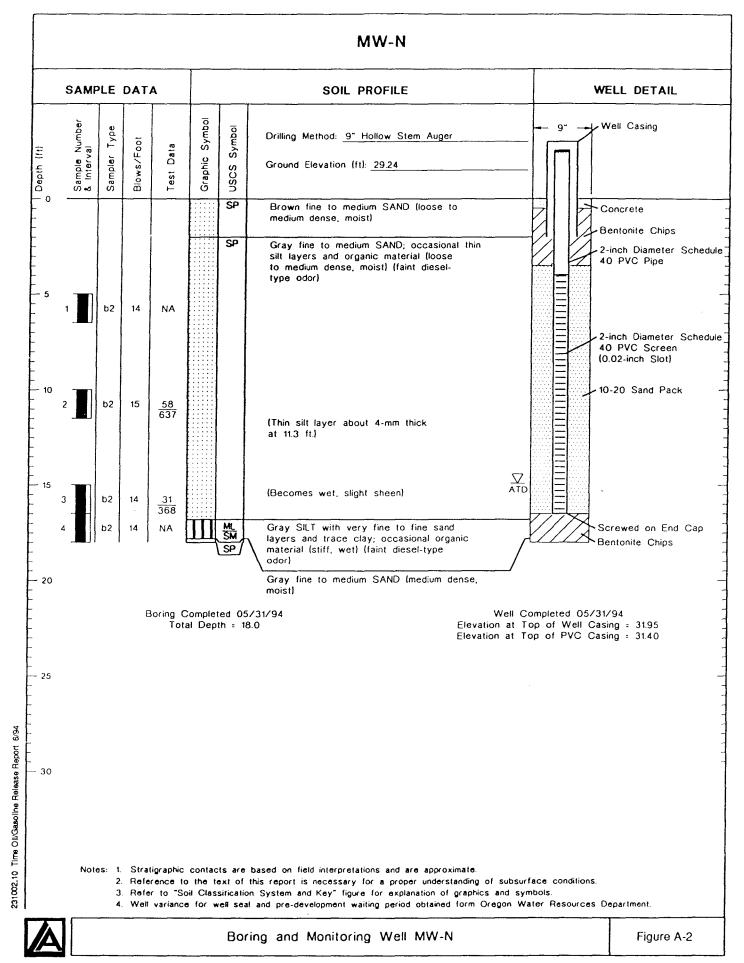


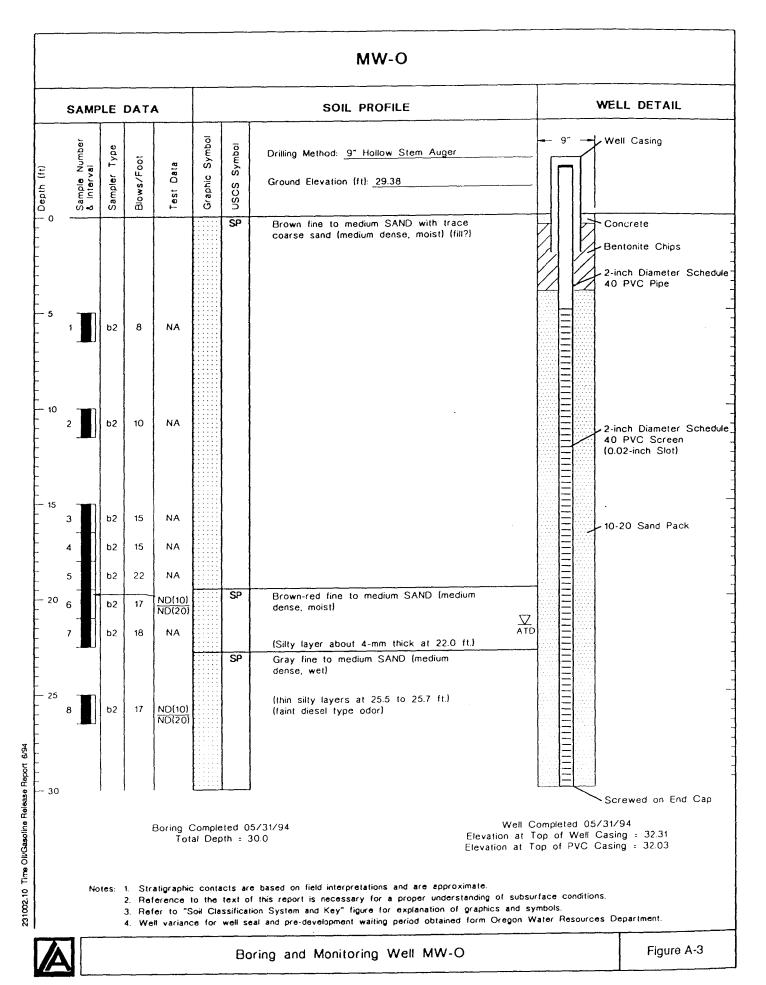


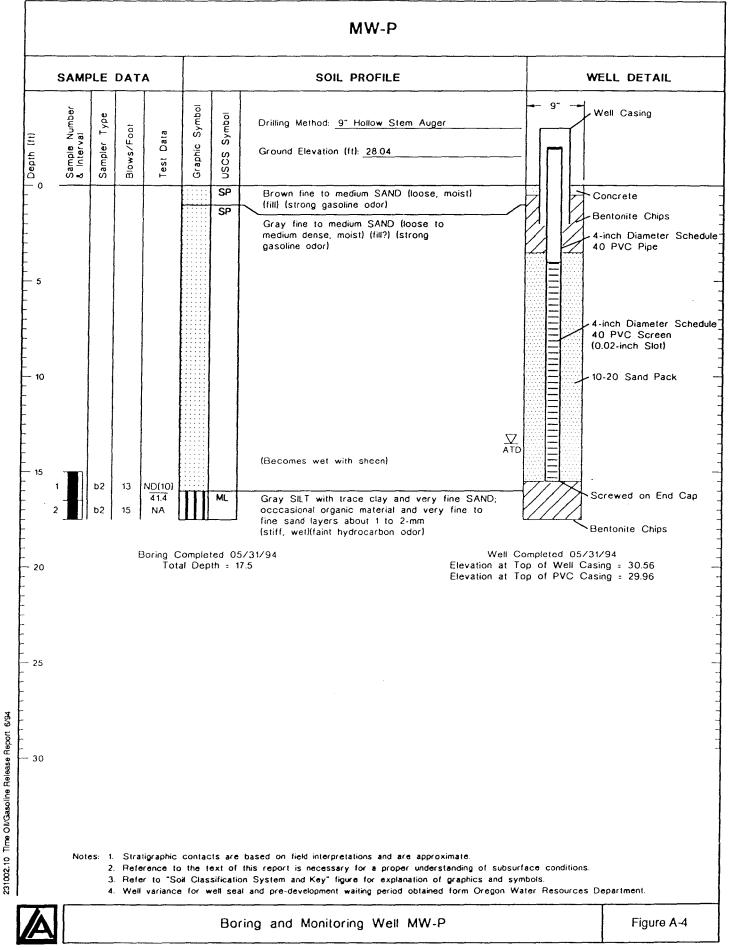


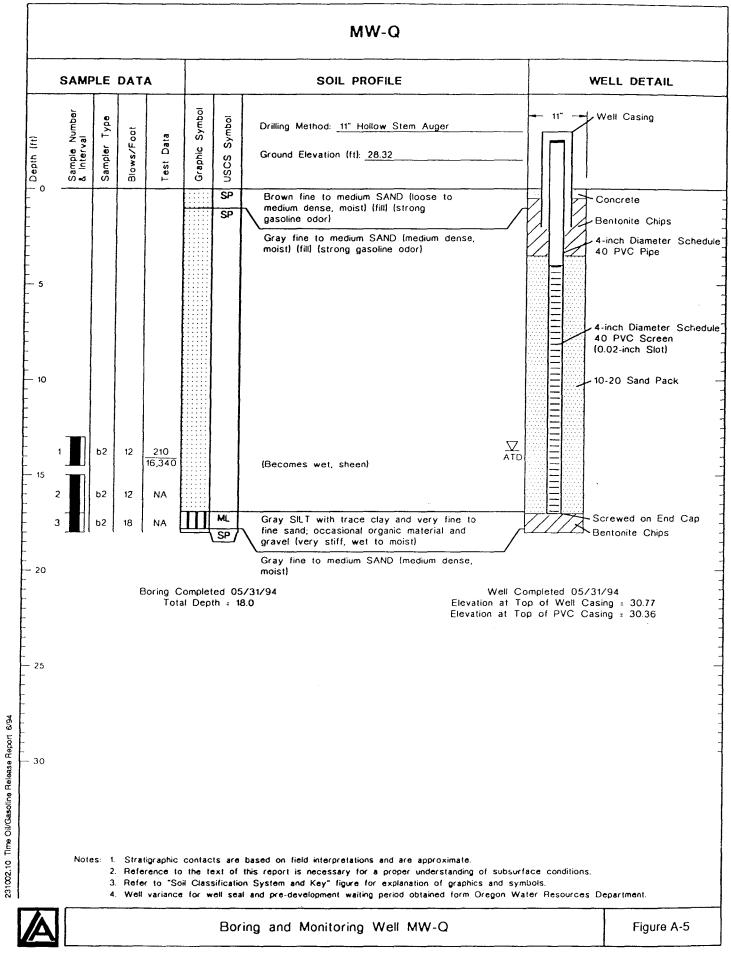






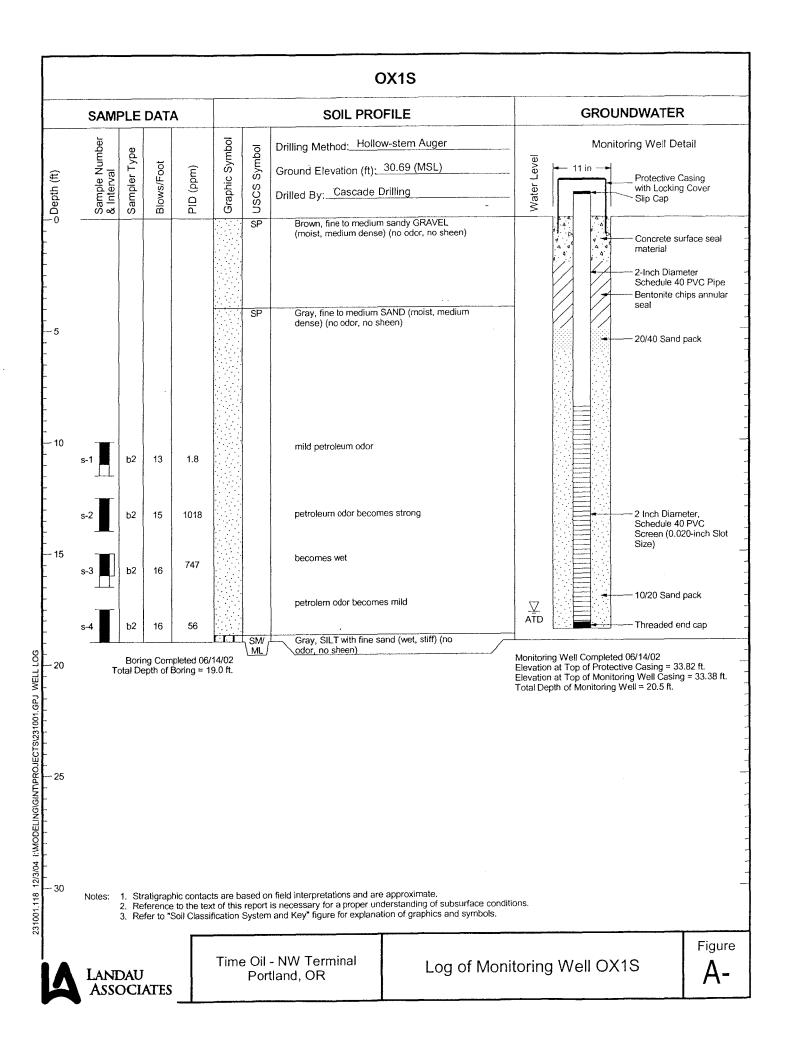


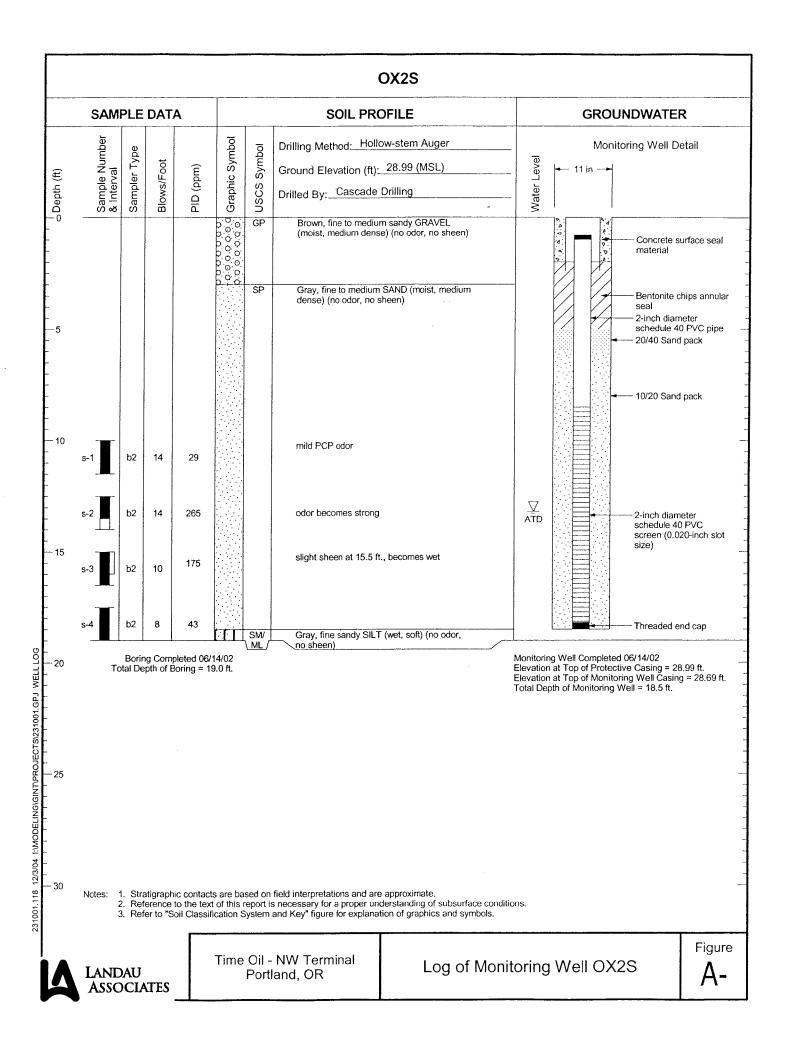


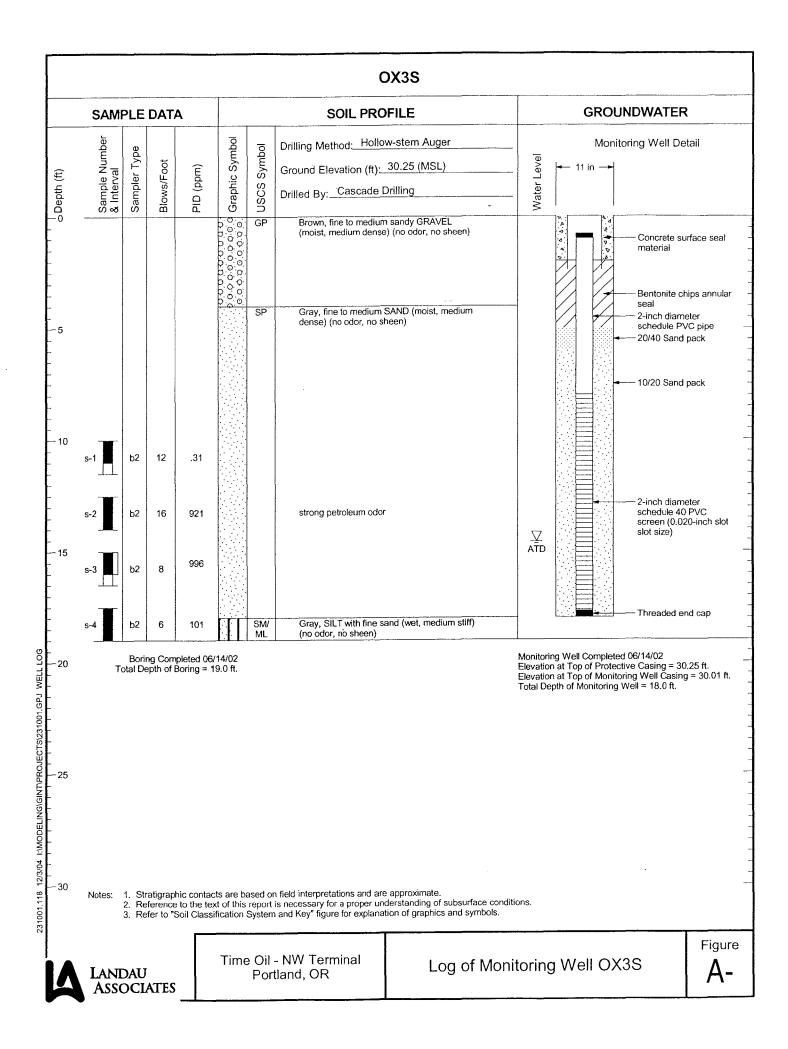


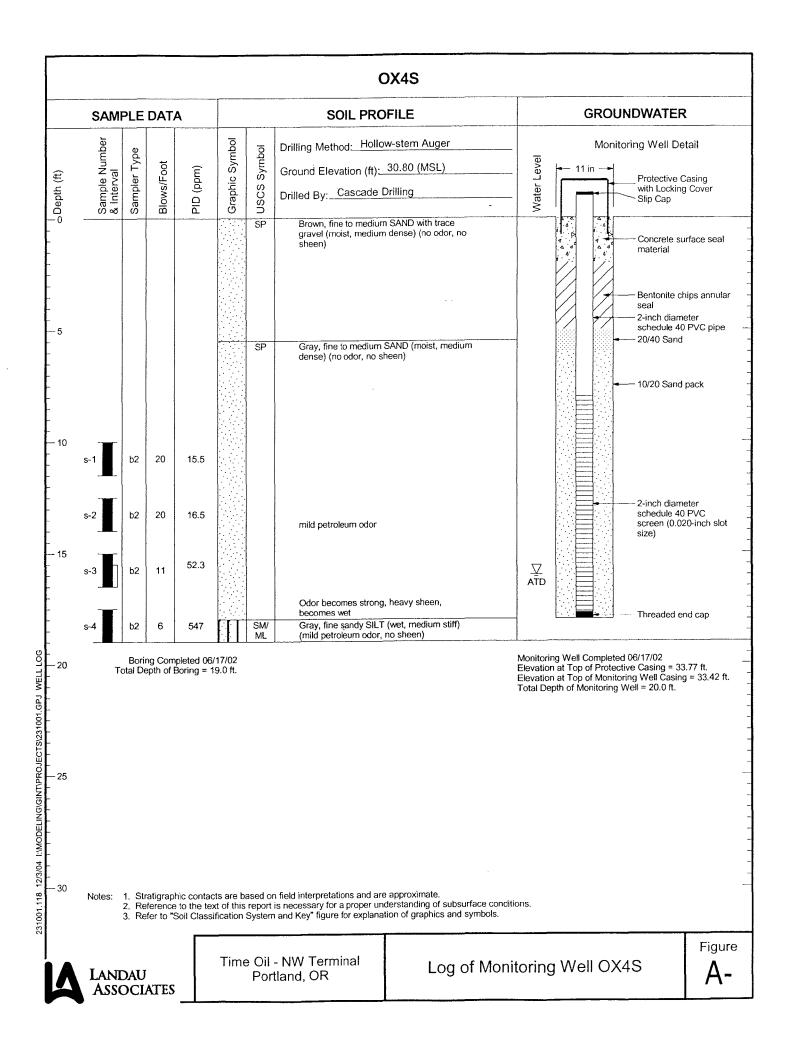
Boring and Monitoring Well MW-R

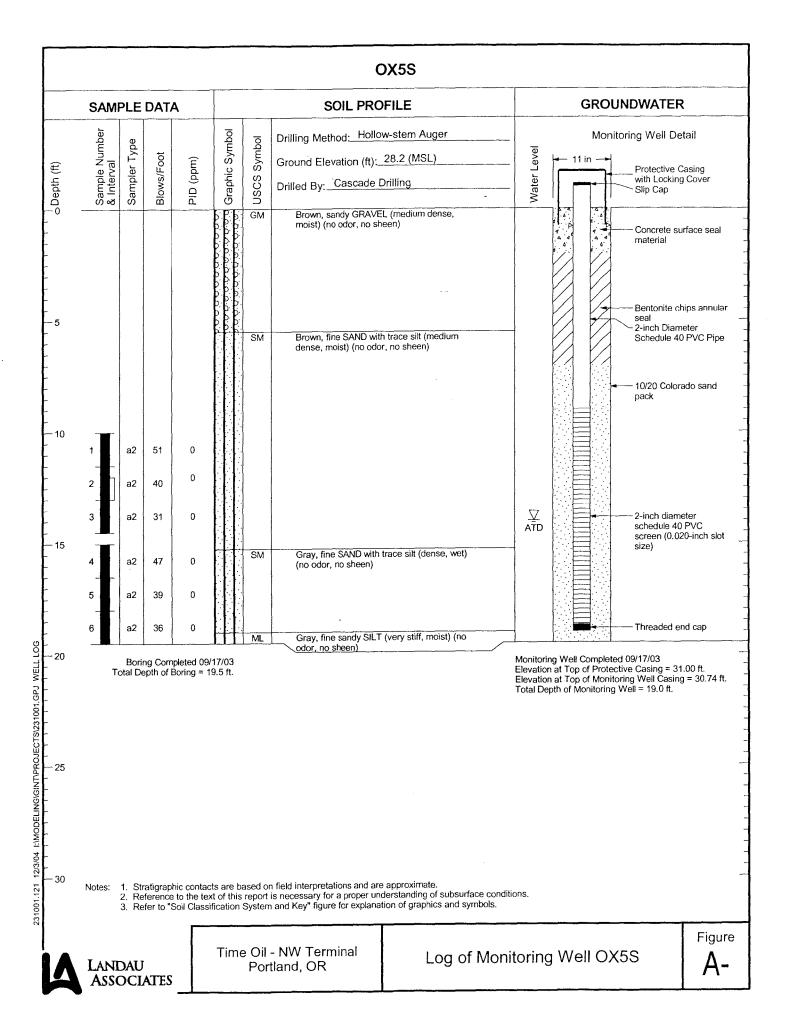
Figure A-6

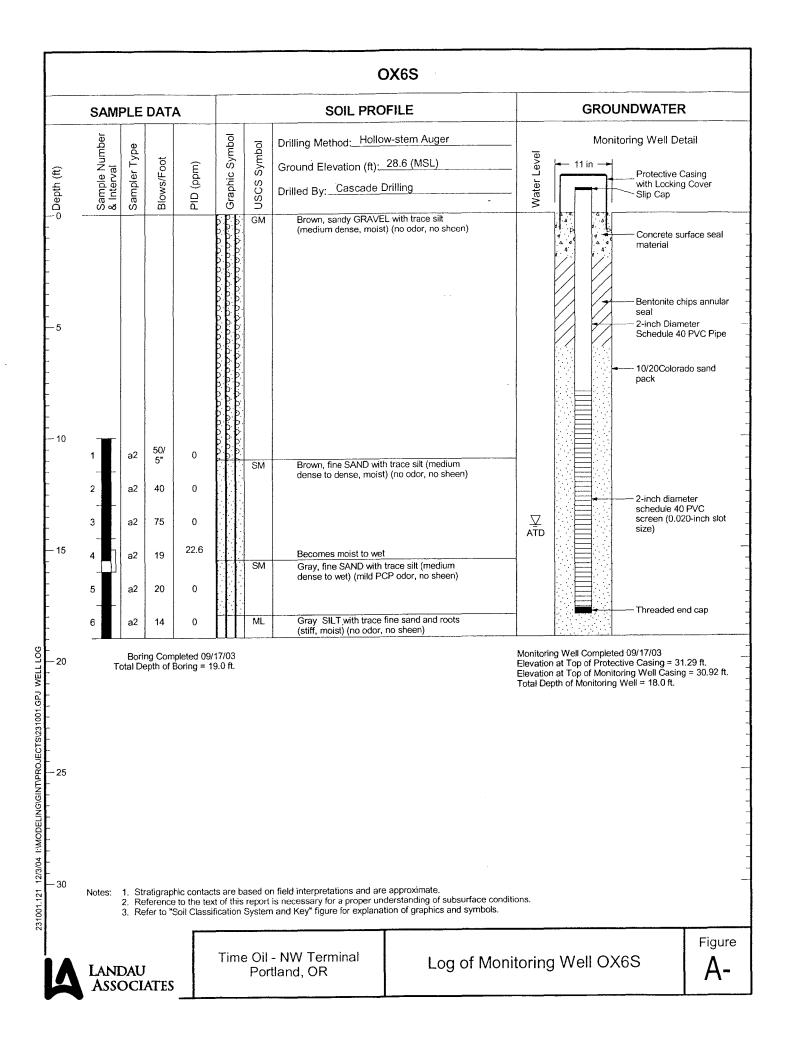


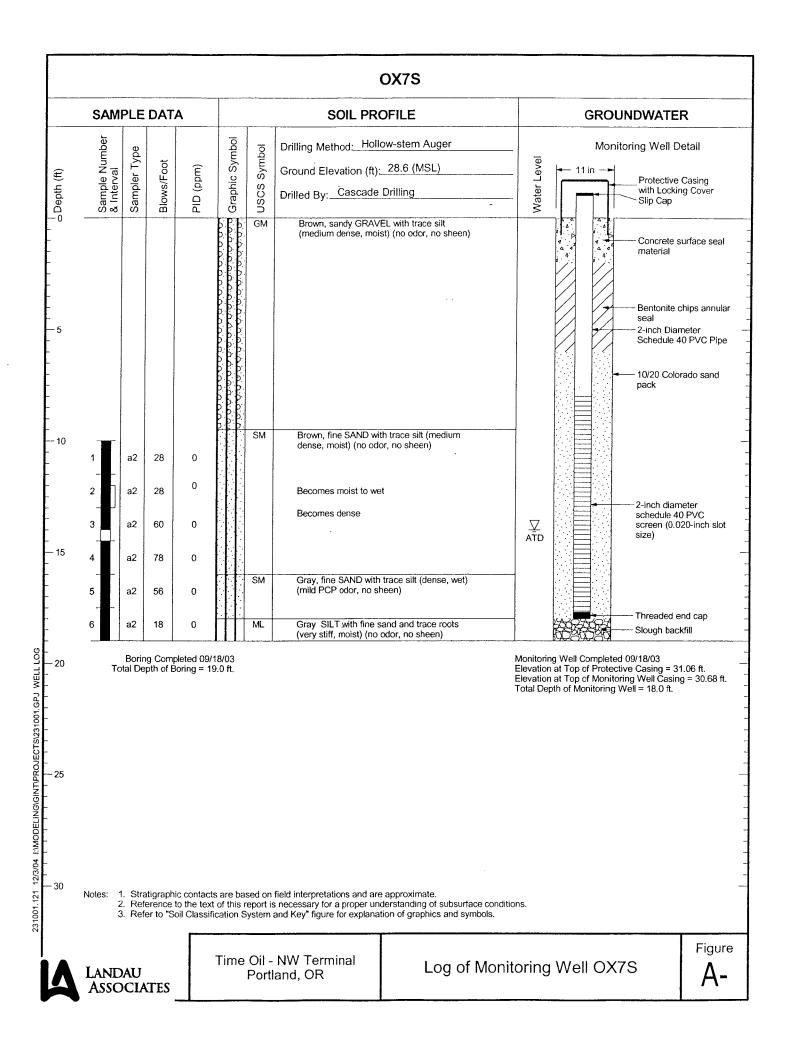


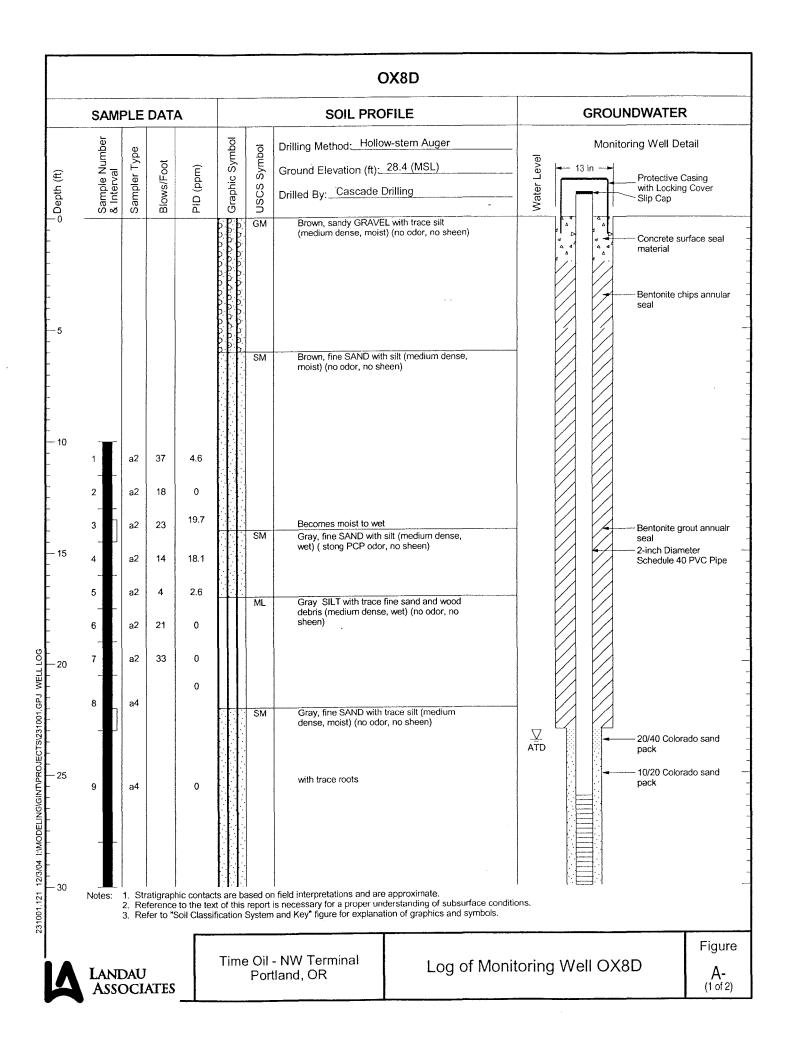


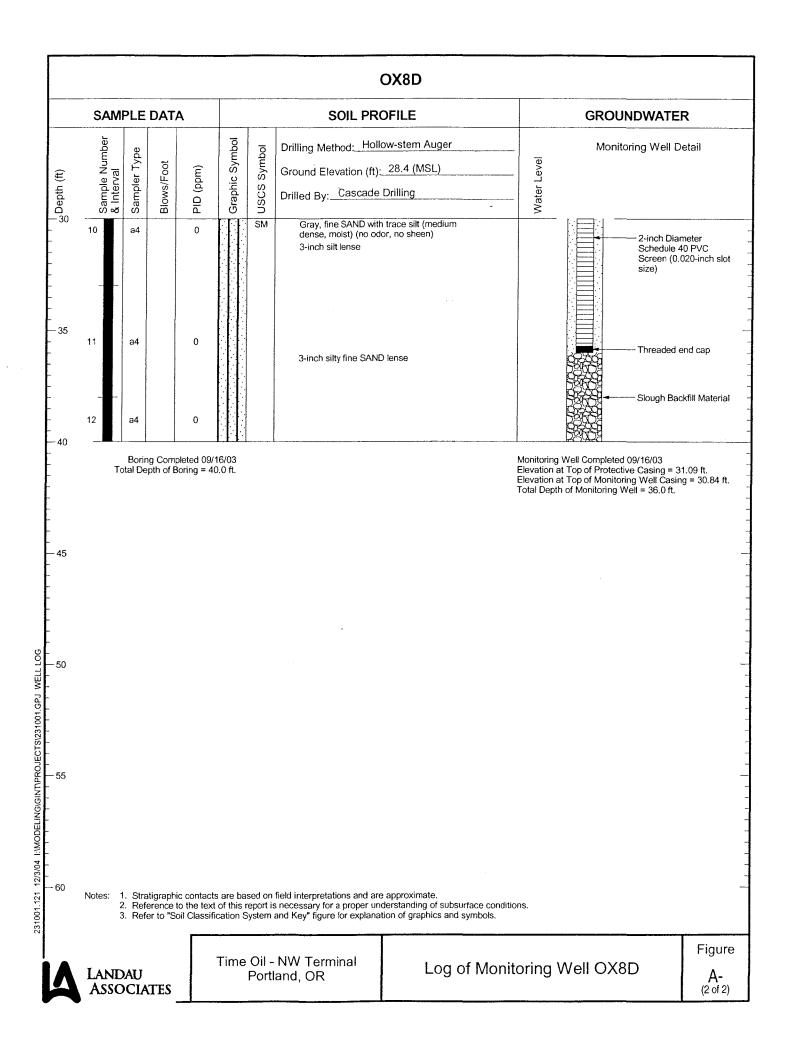


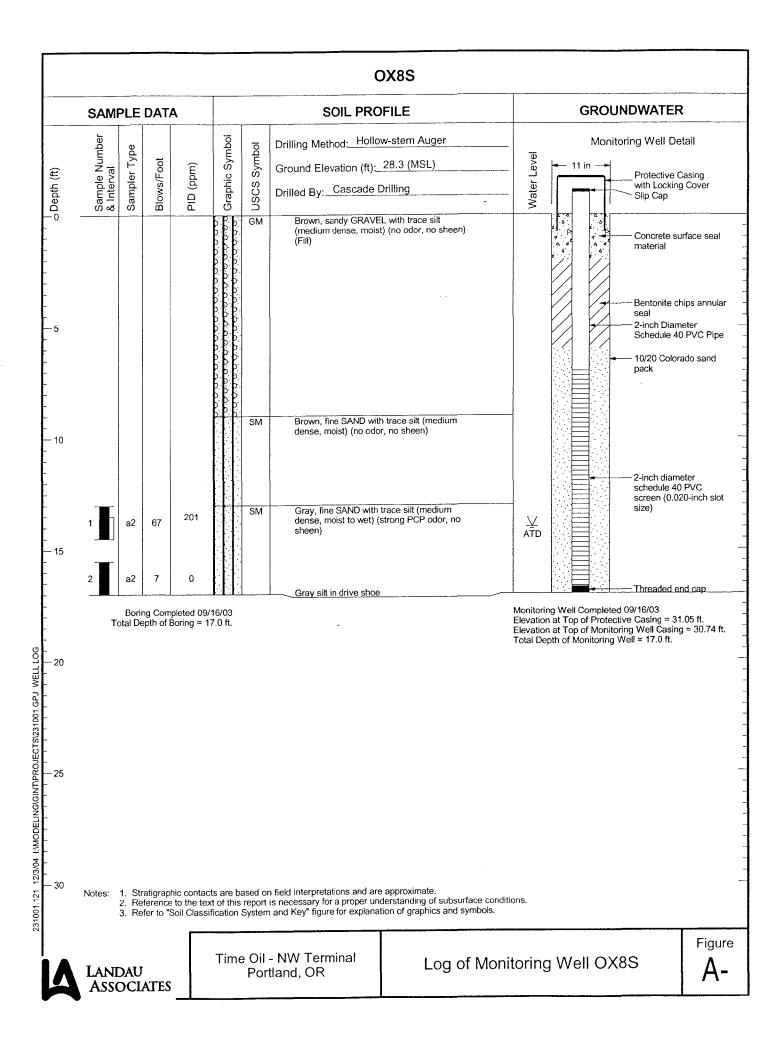


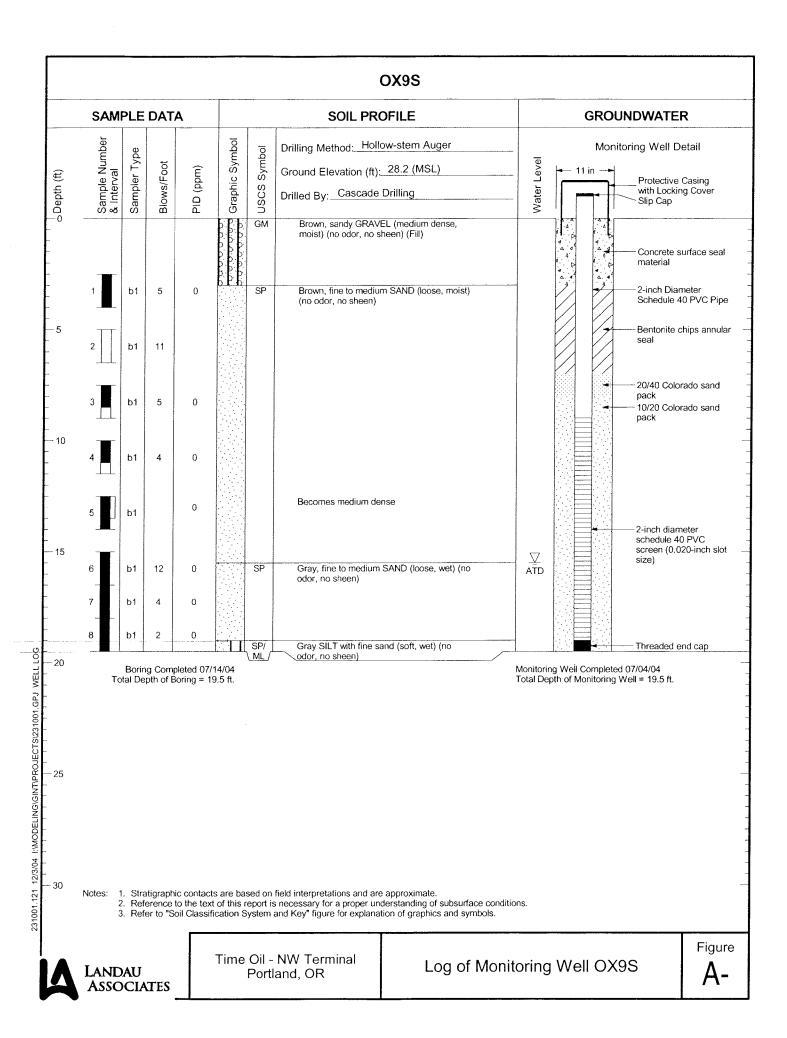


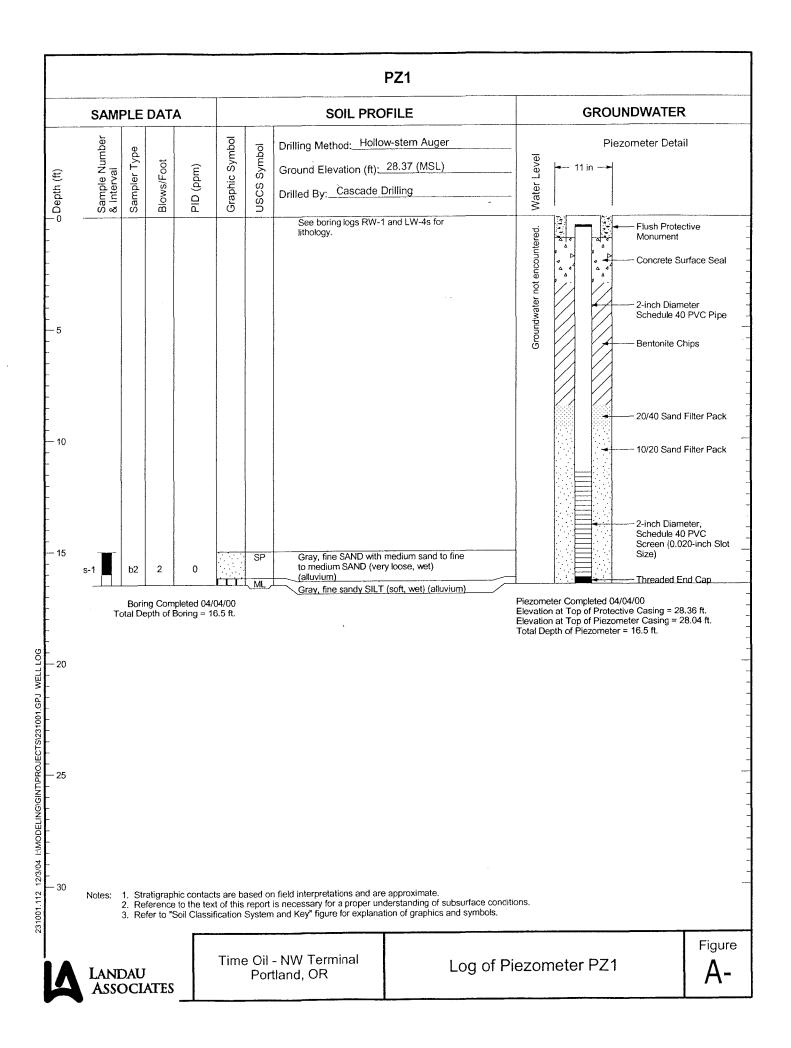


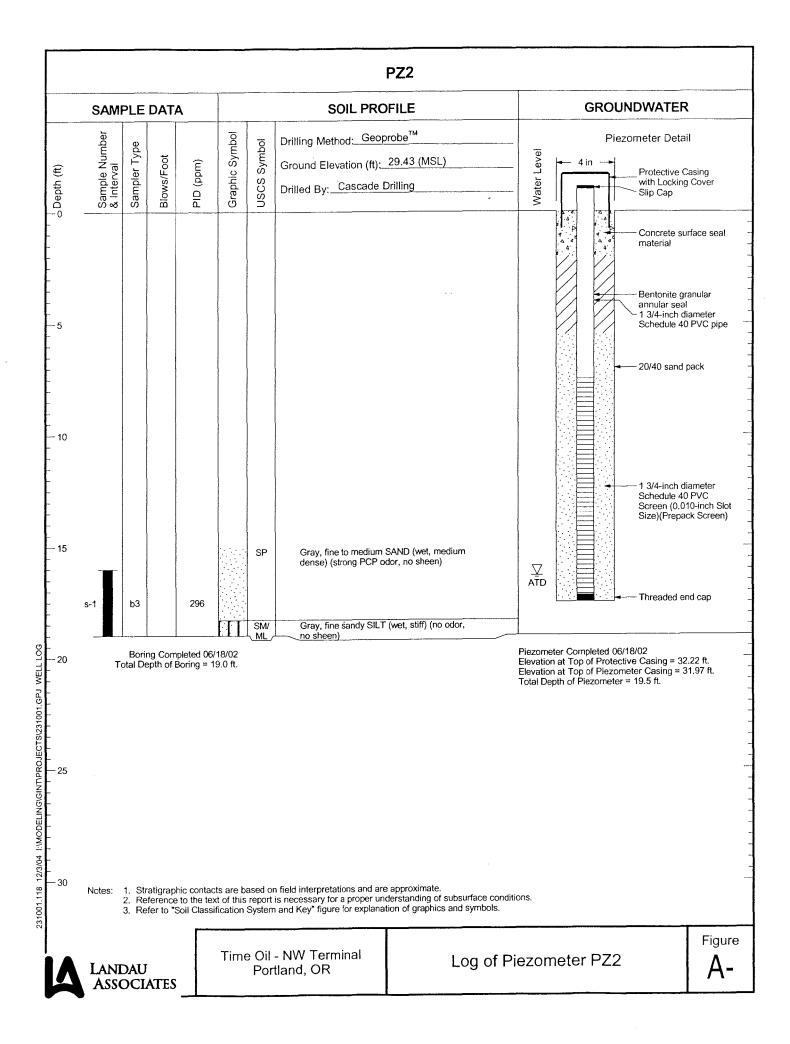


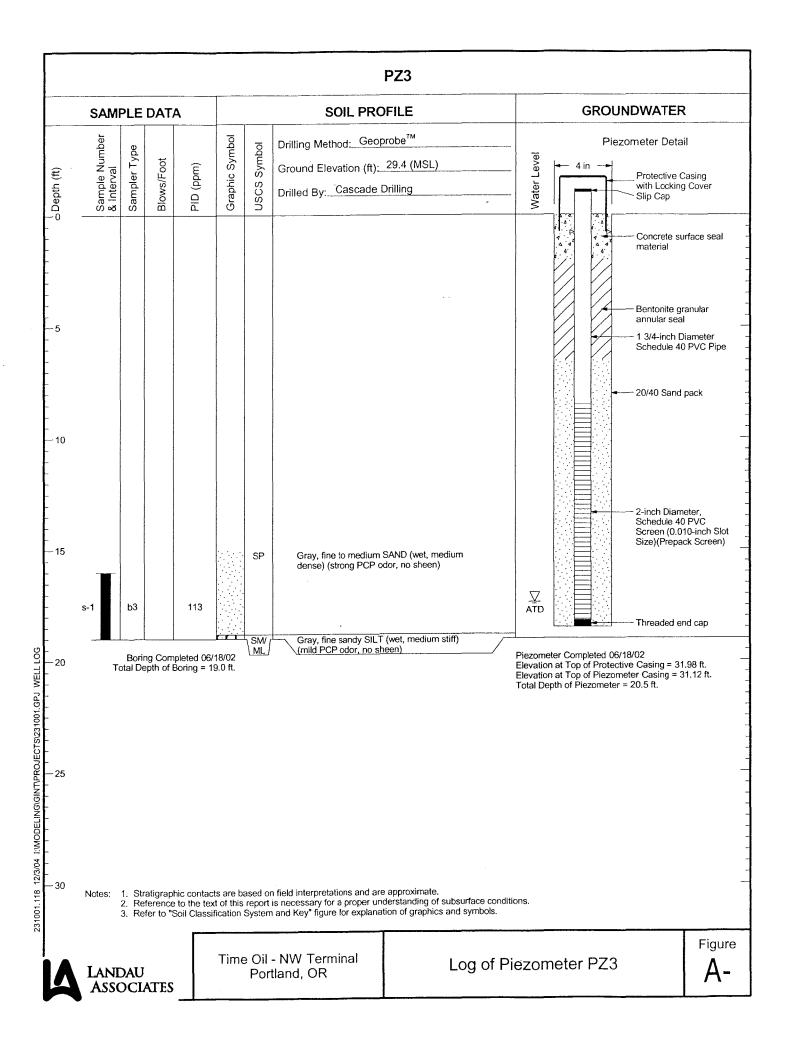


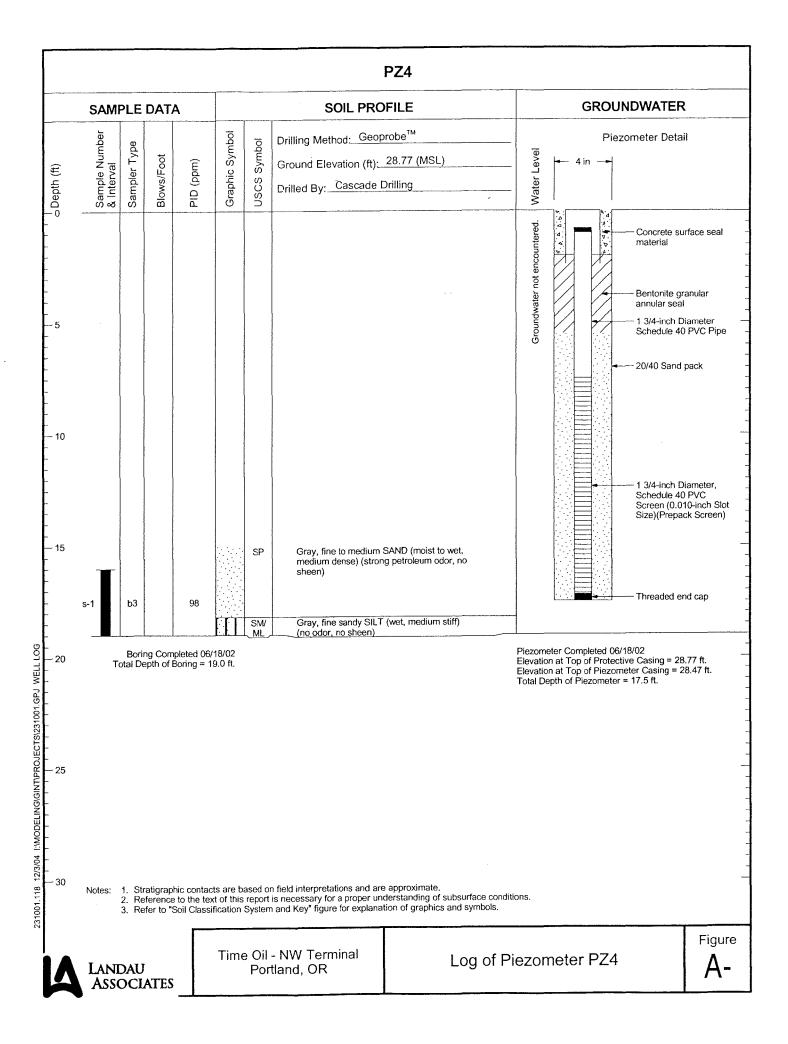


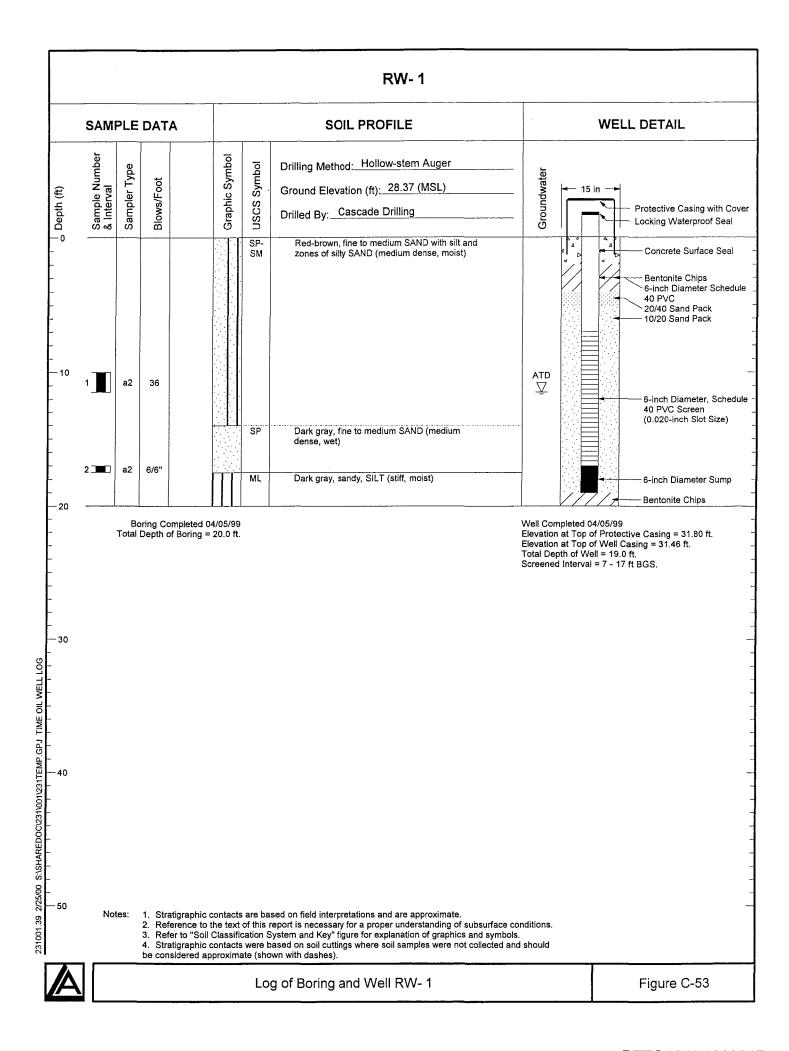


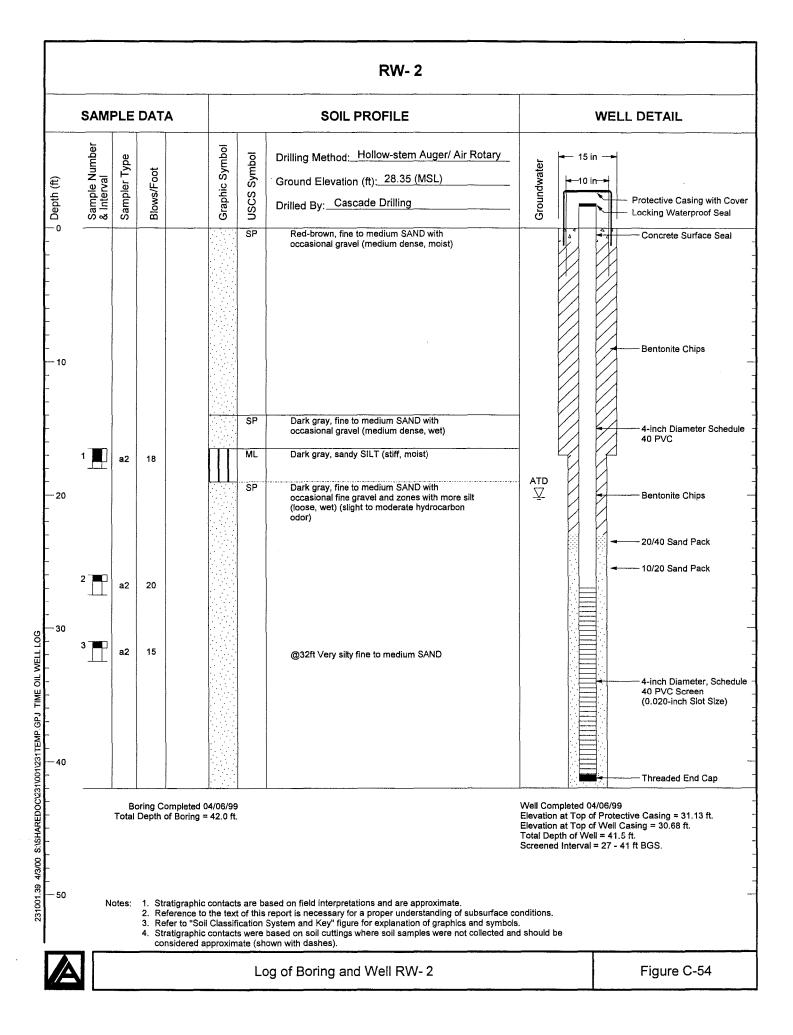












## HISTORICAL WELL LOGS

This appendix contains the following available historical (pre-Phase II Remedial Investigation) well logs:

- Wells 1, 2, 3, 4, A, B, C, D, E, F, G, H, I, (installed by Time Oil/Riedel; 1985-86)
- Wells B1, B2, J1, J2, J3, G1A (installed by ECOVA; 11/1988 01/1999)
- Boring and Monitoring wells N, O, P, Q, R (installed by Landau Associates; 05/1994).

Well logs are not available for wells K, L, and M.

FIGURE 6

CONSTRUCTION DIAGRAM FOR

WELLS 1, 2 AND 3

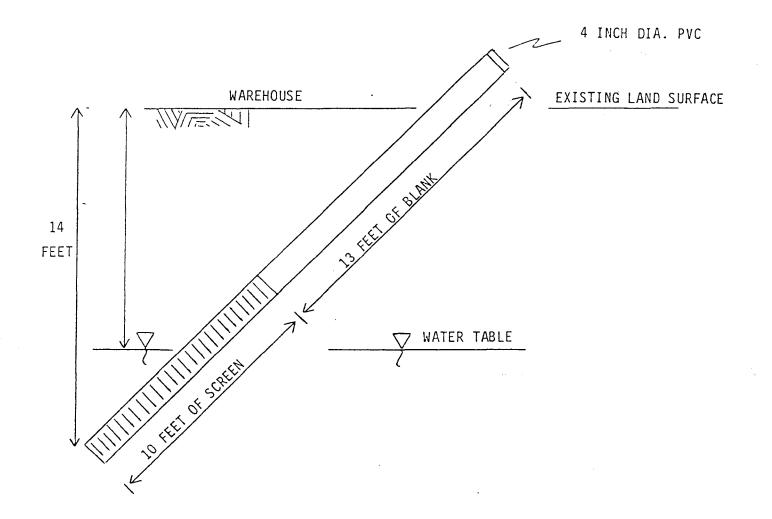
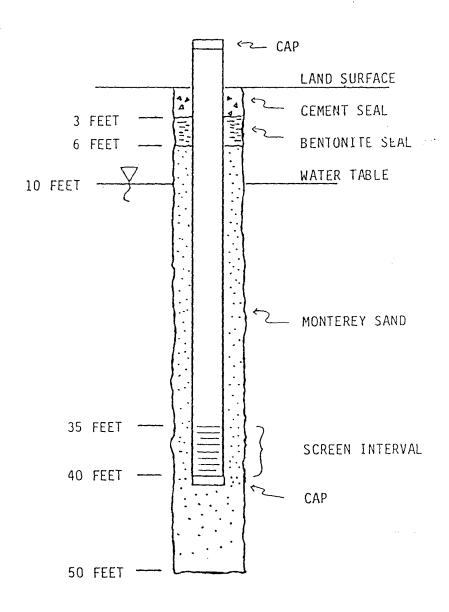
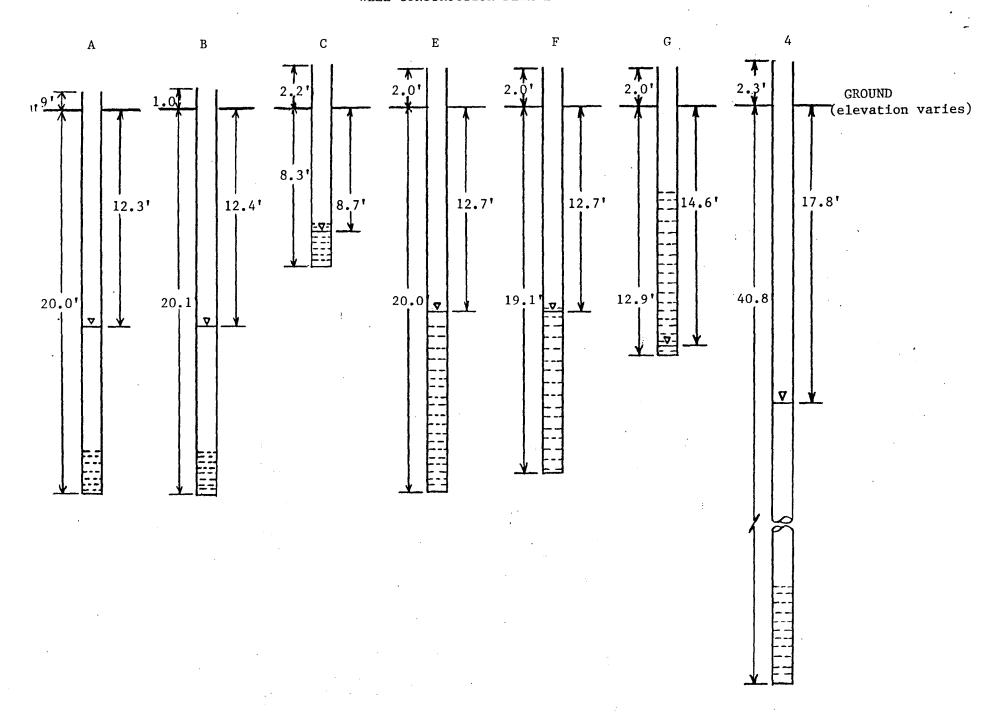


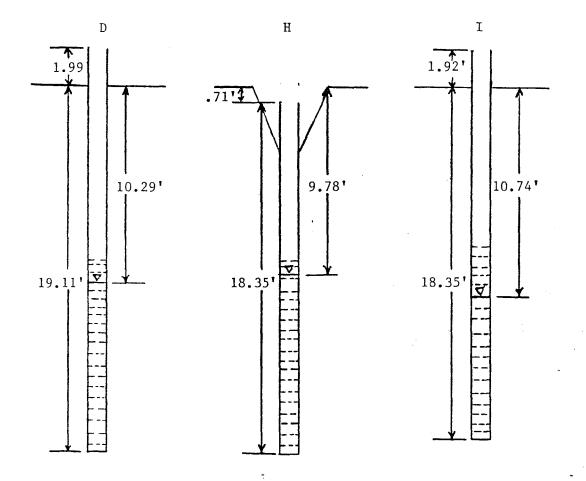
FIGURE 7

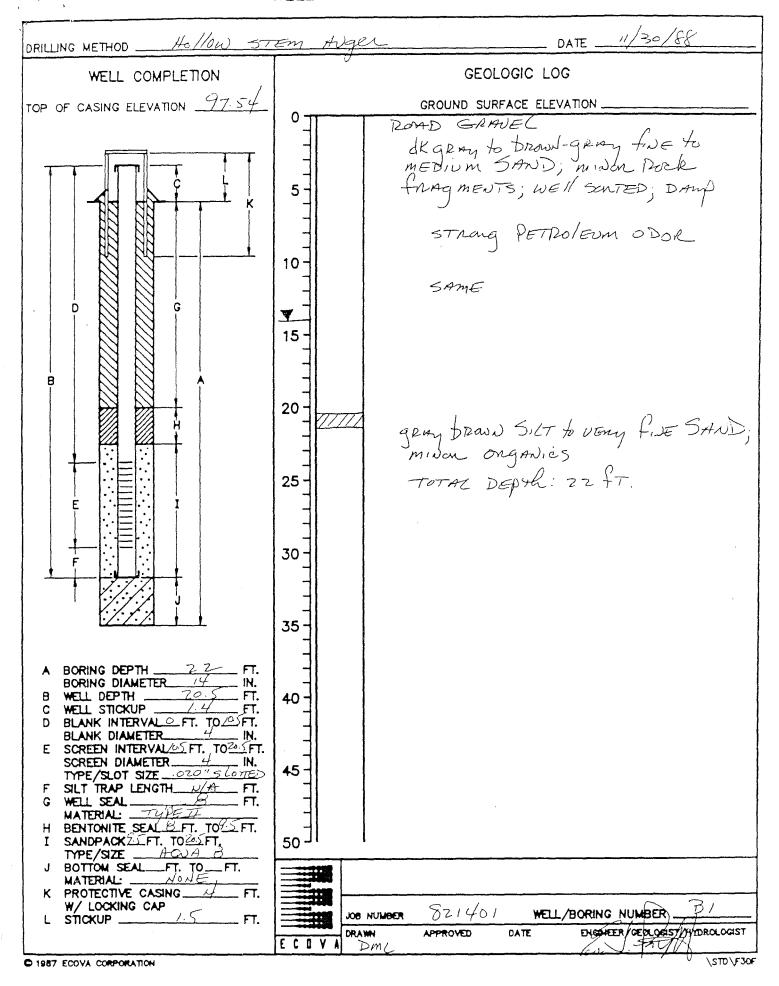
CONSTRUCTION DIAGRAM FOR

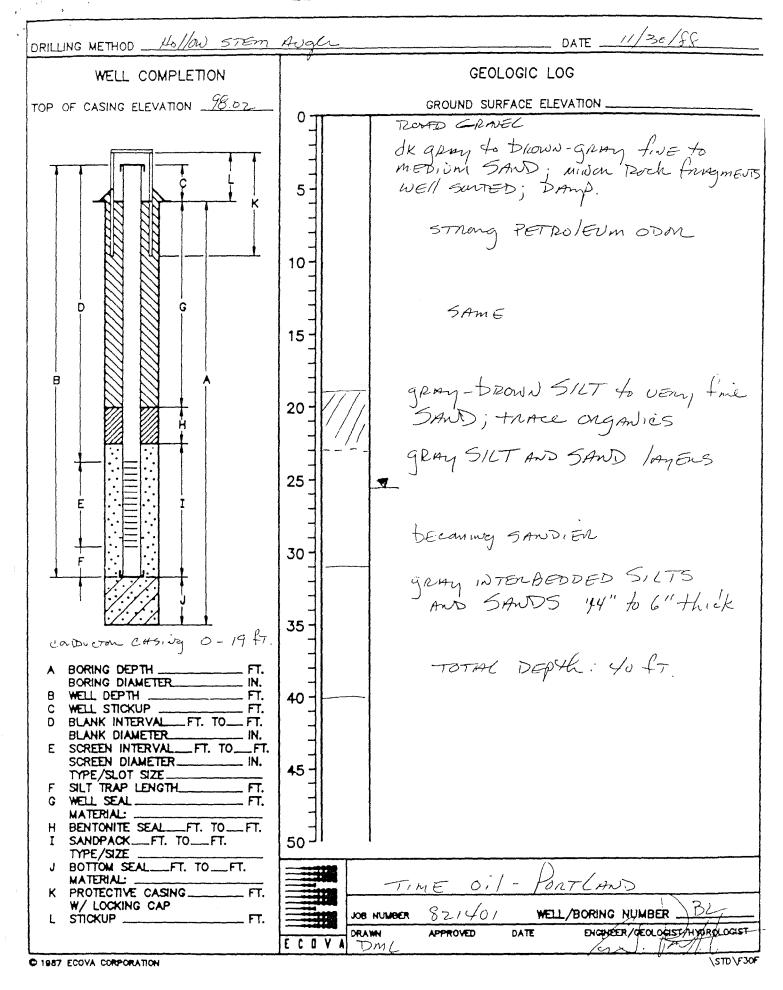
WELL 4







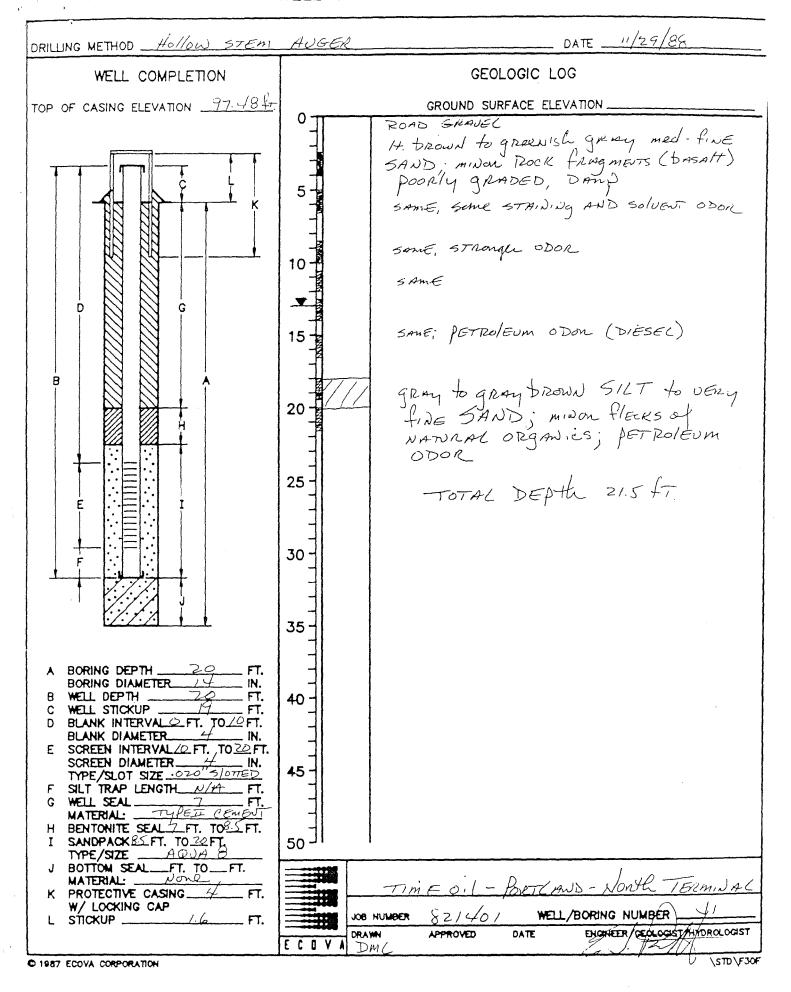


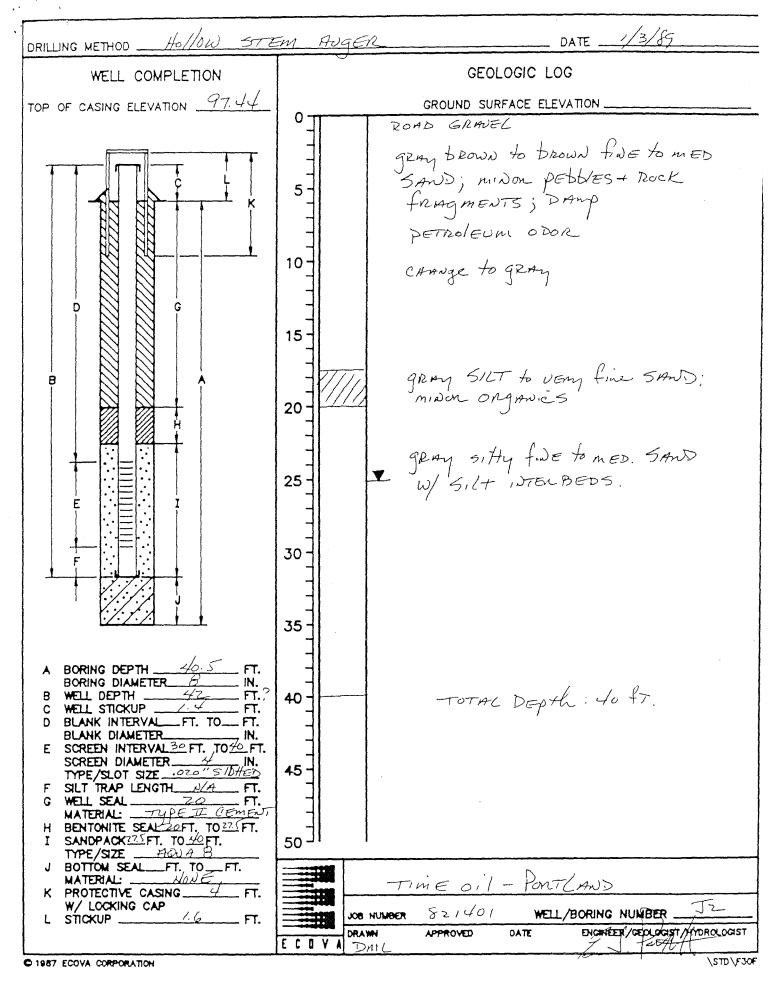


TOP OF CASING ELEVATION  WELL COMPLETION DETAILS  GROUND SURFACE ELEVATION  LOG OF BORING  GROUND LEVEL  O ROUND LEVEL  O PRODUCTOR CASING O to 19 feet  SENTONITE-CEMENT SEAL to feet  SENTONITE-CEMENT SEAL to feet  SAME  20 GROUND LEVEL  THE GOOD GROUND LEVEL  SAME  SENTONITE-CEMENT SEAL to feet  SAME  20 GROUND LEVEL  SAME  SENTONITE-CEMENT SEAL to feet  SAME  20 GROUND LEVEL  SAME  SENTONITE-CEMENT SEAL to feet  SAME  20 GROUND LEVEL  SAME  SAME  30 JAMES BOREHOLE 20 to 404641  GROUND SENTONITE PELLET SEAL TO to 27 feet  SAME  SAME  SENTONITE PELLET SEAL TO 10 27 feet  SAME  SENTONITE PELLET SEAL TO 10 27 feet  SAME  SENTONITE PELLET SEAL TO 10 27 feet  SAME  SA	DRILLING MET	THOOS Hollow STEM AND	ger/casle	<del>. 100</del> L	DATE 11/30/88	
GROUND LEVEL  O PROME GRANCE BY THANK THAN			ł	1		
DENTONITE—CEMENT SEAL  TO TO PASSE  DENTONITE—CEMENT SEAL  TO Gest  DENTONITE—CEMENT SEAL  TO TO PASSE  DENTONITE—CEMENT SEAL  TO TO PASSE  DENTONITE—CEMENT SEAL  TO GEST SEAL  TO GEST SEAL  TO GEST SEAL  TO GEST SEAL  TO TAKE THE SEAL  TO TO PASSE  DENTONITE PELET SEAL  TO TO PASSE  DENTONITE PELET SEAL  TO TO PASSE  TO TO PASSE  TO TO FORT  DENTONITE PELET SEAL  TO TO PASSE  TO TO FORT  DENTONITE PELET SEAL  TO TO PASSE  TO TO FORT  DENTONITE PELET SEAL  TO TO PASSE  TO TO FORT  DENTONITE PELET SEAL  TO TO PASSE  TO TO FORT  DENTONITE PELET SEAL  TO TO FORT  TO THE OIL FORT  DENTON OF BOREHOLE  FORT  DENTON OF BOREHOLE  TO DATE  DENTON OF BOREHOLE  TO DATE  DENTON OF BOREHOLE  TO DATE  DENTON NUMBER  DENTON NUMBER  DENTON OF BOREHOLE  TO DATE  DENTON NUMBER  DENTON DENTON TO PROCECUCAST APPROVES	WEL	L COMPLETION DETAILS		LOG OF BORING		
The DIAMETER STEEL CONDUCTOR CASINS O to 19 feet  BENTONITE-CEMENT SEAL to feet  10  BENTONITE CEMENT SEAL to feet  10  JV DIAMETER BOREHOLE O to 19 feet  20  BENTONITE CEMENT SEAL TO 15  SAME  20  BENTONITE CEMENT SEAL TO 15  SAME  20  BENTONITE CEMENT SEAL TO 15  BENTONITE BOREHOLE 20 to 40 feet  25  BENTONITE PELET SEAL TO 12 porfeet  BENTONITE PELET SEAL TO 40 feet  PLC (JOD) SCREEN 20 to 40 feet  The BORTOM OF BOREHOLE TO 40 feet  BOTTOM OF BOREHOLE TO 50  BOTTOM OF BOREHOLE TO THE DIAMETER SCOTTED AND BOTTOM OF BOREHOLE TO 50  BOTTOM OF BOREHOLE TO THE DIAMETER SCOTTED AND BOTTOM OF BOREHOLE TO THE DIAMETER SCOTTED AND BOTTOM OF BOREHOLE TO SOUTH AND BOTTOM OF BOTTOM				GF	ROUND LEVEL	
PVC BLANK O to 320 feet.  BENTONITE PELLET SEAL 20 to 27 feet.  Aquis 8  10720 SILICA SAND PACK 27 to 40 feet.  PVC (0,020) SCREEN 20 to 40 feet.  PVC BLANK SILT TRAP  TO 188TL  BOTTOM OF BOREHOLE 40  BOTTOM OF BOREHOLE 40  BOTTOM OF BOREHOLE 40  BOTTOM OF BOREHOLE 40  BOTTOM OF BOREHOLE 45  BORING NUMBER  BORING NUMBER  BORING NUMBER  BORING NUMBER  BORING NUMBER  BORING NUMBER		DENTONITE—CEMENT to feet  DENTONITE—CEMENT to feet  DIAMETER BORE O to 19 feet  BENTONITE—CEMENT  BENTONITE—CEMENT  BENTONITE—CEMENT	SEAL 10- HOLE 15- 20-	ROMD GRA fine to DARK GRA SAME SAME SAME GRAY 5, GRAY 5,	medim SAND medim SAND my to brawn, fine to medion mwon Roch Fringments, Darp Petroleum open  Petroleum open  MINON ongavics  ILT and SAND layers	
BOTTOM WELL CAP BOTTOM OF BOREHOLE HO feet.  BOTTOM OF BOREHOLE HO feet.  BORING NUMBER  BORING NUMBER  BORING NUMBER  BORING NUMBER  BORING NUMBER		BENTONITE PELLET S  To to 27 feet.  Aqua 8  19/20 SILICA SAND  27 to 40 feet.	PACK			
DRAWN JOB NUMBER APPROVED DATE ENGINEER/GEOLOGIST/HYDROLOGIST		PVC (.020) SCREEN  TO 40 feet.  PVC BLANK SILT TRA  TO 1881  BOTTOM WELL CAP  BOTTOM OF BOREHO	45 - LE	T:D.	40 fect	
	E C D Y A	The oil/Penre	CAND	В	ORING NUMBER	
		_	APPROVED	DATE		

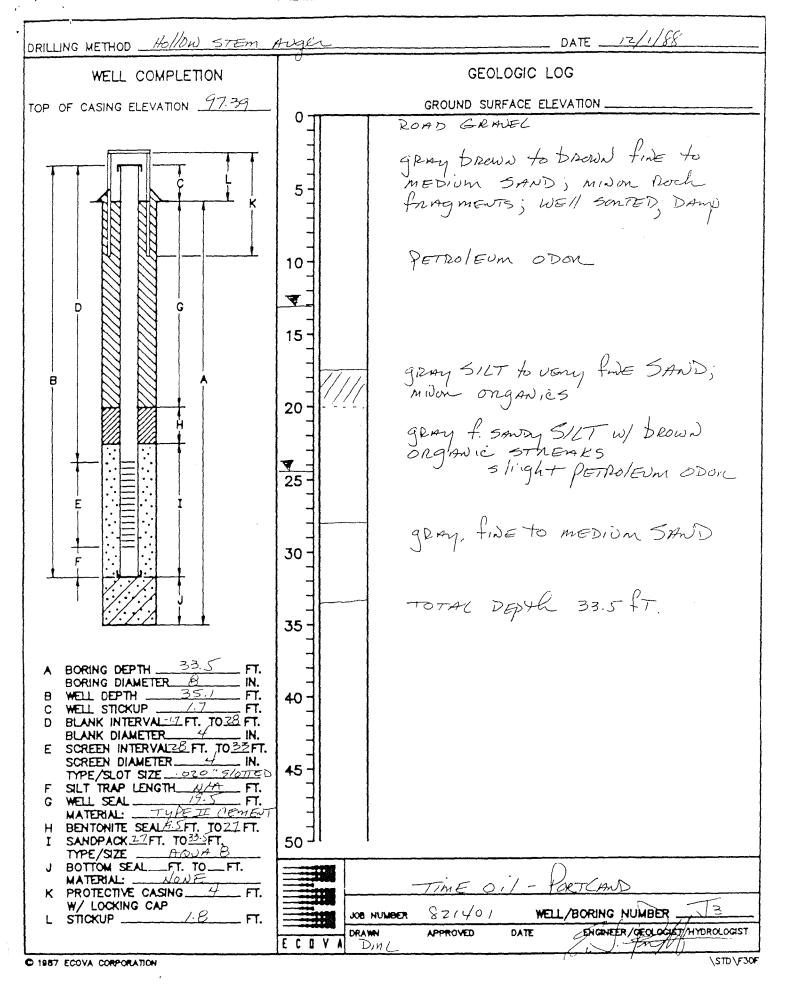
DRILLING METHOD	DATE			
WELL COMPLETION	GEOLOGIC LOG			
TOP OF CASING ELEVATION	GROUND SURFACE ELEVATION			
	DK GRAY to GRAY-DROWN, FIJE TO MEDIUM SAND: MINON POCH FRAGMENTS; WELL SONTED; DAND Slight PETROLEUM O'DON			
	5Ame			
B A A	SAME			
	25- THIN BEDS of ong ANIC SILT			
	30- Sfine to MEDIUM SAND 35-			
A BORING DEPTH 35 FT. BORING DIAMETER IN.	gray SILT to Very the JAMES TOTAL DEPTH: 35 FT			
B WELL DEPTH	45			
H BENTONITE SEALZEFT. TO 24FT.  I SANDPACK 2 FT. TO 3 FT.  TYPE/SIZE AQD A-8	50			
J BOTTOM SEAL_FT. TO_FT.  MATERIAL:	TIME Oil - PONTLAND			
W/ LOCKING CAP L STICKUP/	JOB NUMBER 82140/ WELL/BORING NUMBER 51			
	ECOVA DM L APPROVED DATE ENGINEER/GOLOGIST/HYDROLOGIST			
© 1987 ECOVA CORPORATION	\STD\F30F			

(G1A) BZTO104(e)023327



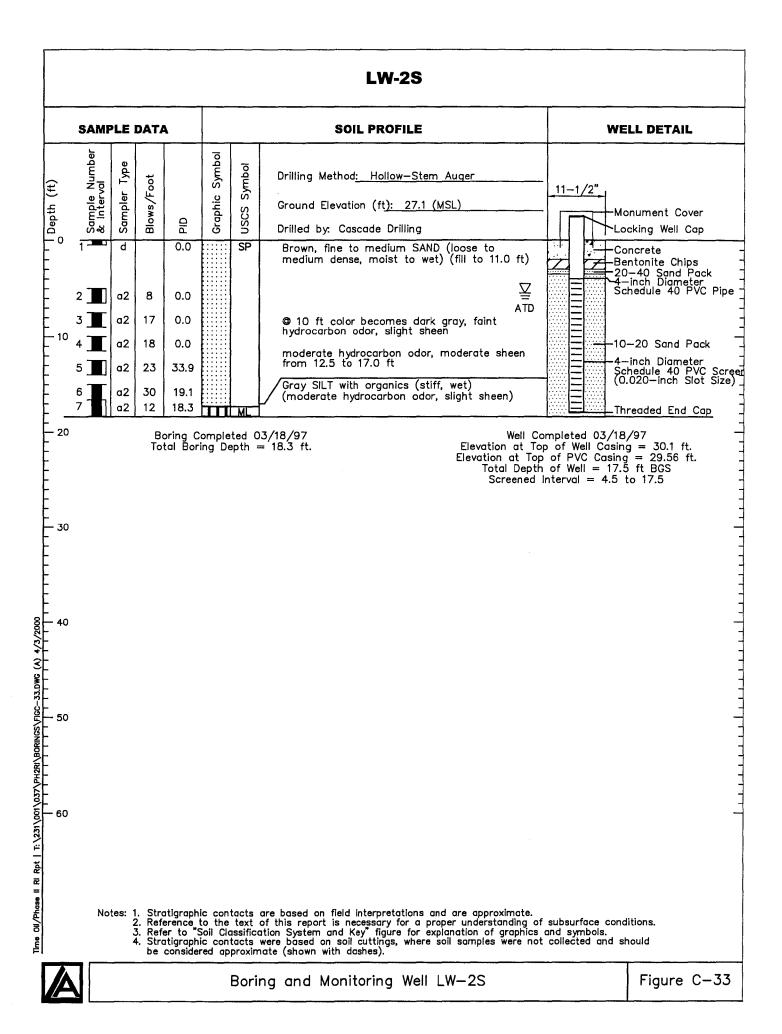


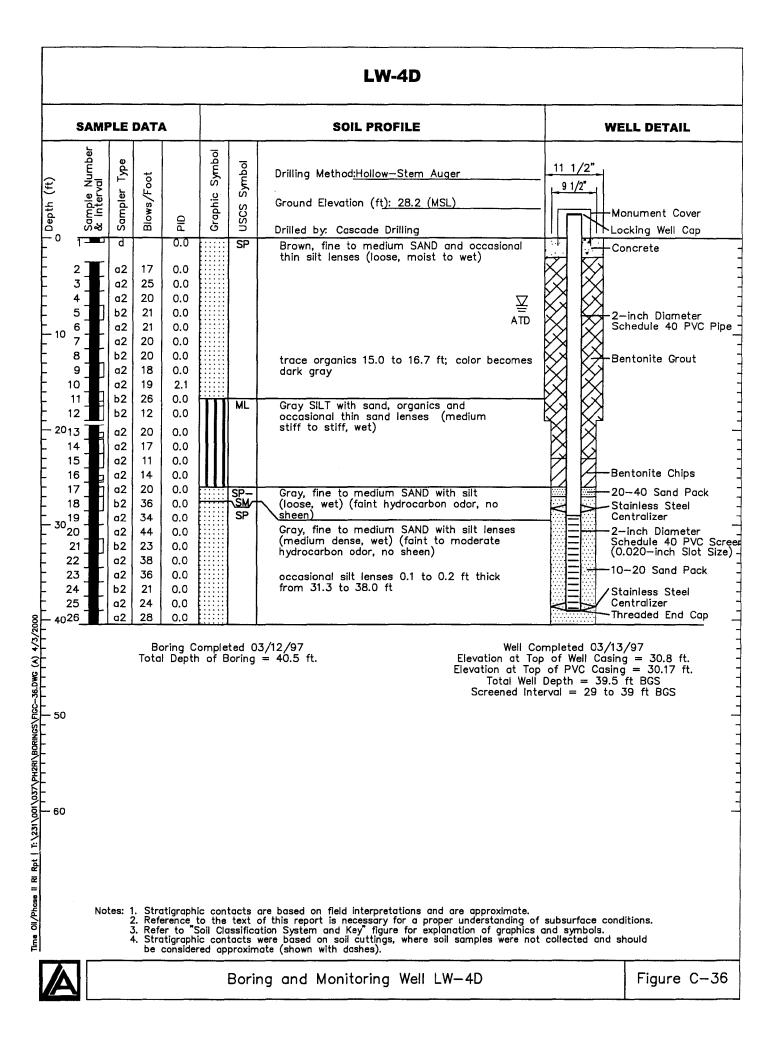
DRILLING ME	THOOS Hollaw STEM AUGCLY	CHOLE	tool	DATE
TOP OF CAS	NG ELEVATION 97.44	GROUND SU	RFACE ELEVATION	
WEI	L COMPLETION DETAILS		LOG OF B	ORING
WEL	DIAMETER STEEL CONDUCTOR CASING O to ZO feet  BENTONITE—CEMENT SEAL O to 20 feet  14" DIAMETER BOREHOLE O to Zo feet	10 -	GROUND I POND GANNEC GAME GAME MODERATE PO SAME MODERATE P	EVEL
	BENTONITE CEMENT SEAL  B' DIAMETER BOREHOLE  Zo to Scheet.  DIAMETER SCHEDULE 40  PVC BLANK  O to Zofeet.  BENTONITE PELLET SEAL  Zo to Zöfeet.  AOUN 8  10/20 SILICA SAND PACK  Zo to Yofeet.  DIAMETER SLOTTED  PVC (.020) SCREEN  Zo to Yofeet.  PVG BLANK SILT TRAP  to feet.  BOTTOM WELL CAP  YO feet.  BOTTOM OF BOREHOLE  Yo feet.	25 -	miter beddled	151LT + fue SAND.
E C O V A	Time oil / Partland		BORING 1	NUMBER
	DRAWN JOB NUMBER APPR	ROVED	DATE ENG	THEER/GEOLOGIST/HYDROLOGIST  DM LANCE

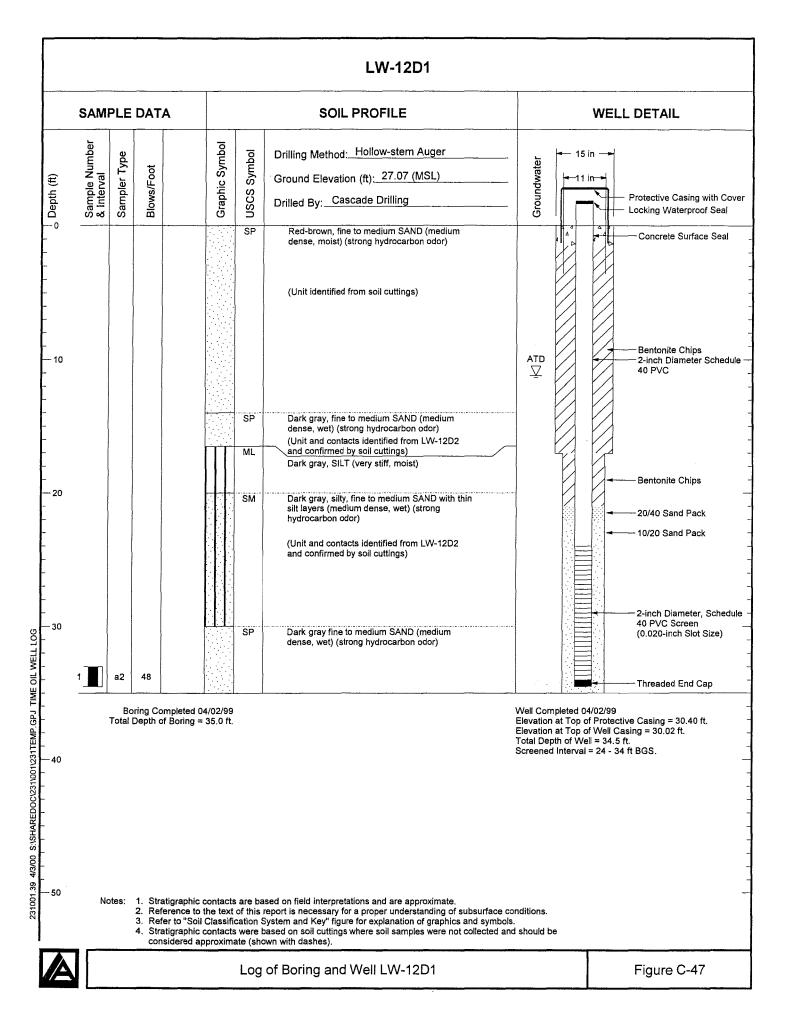


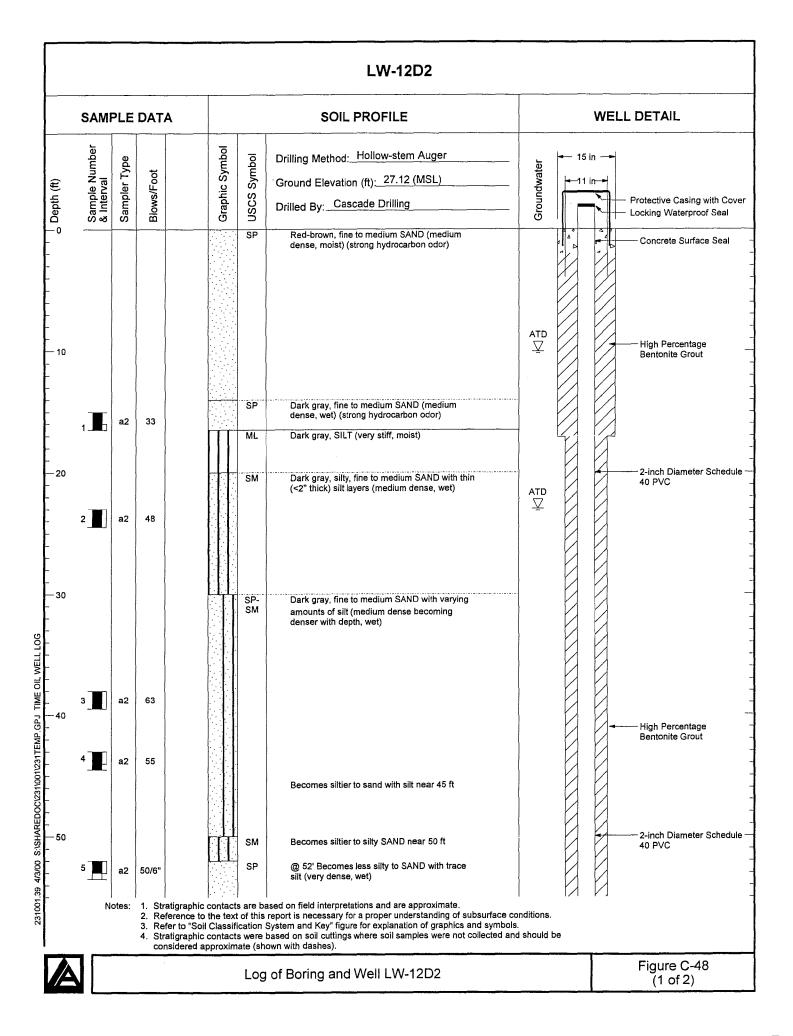
DRILLING METHODS CAPLE TOOL -	DATE
TOP OF CASING ELEVATION 97.29	GROUND SURFACE ELEVATION
WELL COMPLETION DETAILS	LOG OF BORING
	GROUND LEVEL  O ROUND CAMPEL
10" DIAMETER STEEL CONDUCTOR CASING O to 20 feet	gray-brown fine to medin South  ni wer Roch fragmonts; Domp
BENTONITE-CEMENT SEAL o to Zo feet	same moderate petroleum odor
I DIAMETER BOREHOLE  o to Zofeet	5ame
	gray 5ilt to very fine Sound prom organi mutter gray foundy silt
BENDEHLE CEMENT SEAL	gray freto medun Sons
Dentonite pellet seal  Zo to 27 feet.  How 8  19/20 SILICA SAND PACK  27 to 35 feet.	35- 35-
DIAMETER SLOTTED PVC (.020) SCREEN 28 to 35 feet.  DVC BLANK SET TRAP	40 -
BOTTOM WELL CAP  37 feet.  BOTTOM OF BOREHOLE  37 feet.	45 -
ECOVA TIME oil / fartlans	J3
DRAWN JOB NUMBER APP	ROVED DATE ENGINEER/GEOLOGIST/HYDROLOGIST  Day / 16270 0

## **Abandoned Well Logs**

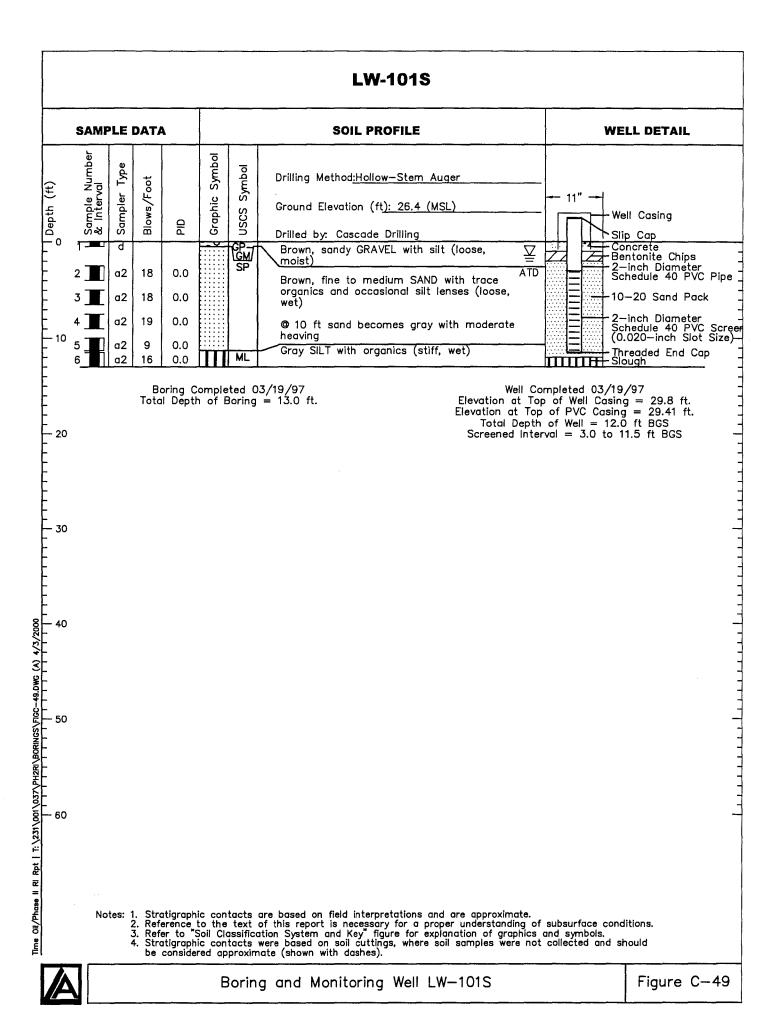


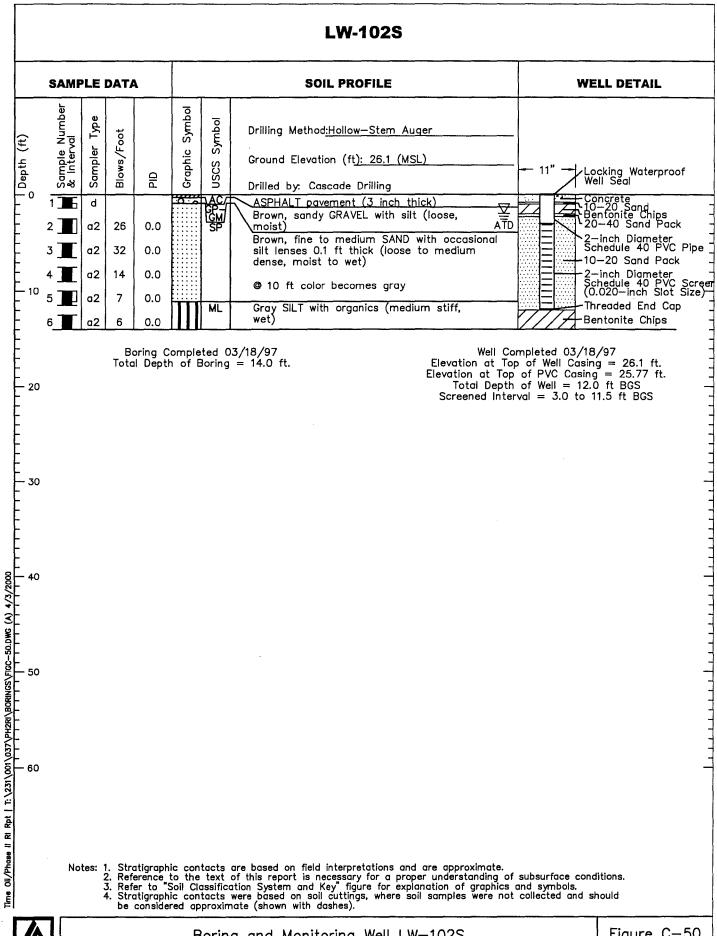






						LW-12D2			
	SAMI	PLE	DATA			SOIL PROFILE		WELL DETAIL	
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger  Ground Elevation (ft): 27.12 (MSL)  Drilled By: Cascade Drilling	Groundwater		
- 60 - 60 	6	a2	50/6"					Double in Ohio	
70	7	<b>a</b> 2	50/6"		SP	Dark gray fine to medium SAND (very dense, wet) (slight hydrocarbon odor)		20/40 Sand Pack 10/20 Sand Pack 2-inch Diameter, Schedu 40 PVC Screen (0.020-inch Slot Size)	
90						@ 85' Heaving sands to 100 ft prevent soil sampling		Threaded End Cap  Bentonite Chips	
- 100 - 110		Γotal [	1. Stratig 2. Refere 3. Refer t 4. Stratig	nce to the text o "Soil Classifi raphic contact	s are ba of this cation s were	ased on field interpretations and are approximate. report is necessary for a proper understanding of subsurface c System and Key" figure for explanation of graphics and symbol- based on soil cuttings where soil samples were not collected ar	Elevation at Top on Total Depth of We Screened Interval conditions.	of Protective Casing = 29.88 ft.  If Well Casing = 29.24 ft.  Il = 85.5 ft.	
<b>A</b> .	7		consid	ereu approxim		own with dashes).  of Boring and Well LW-12D2		Figure C-48 (2 of 2)	

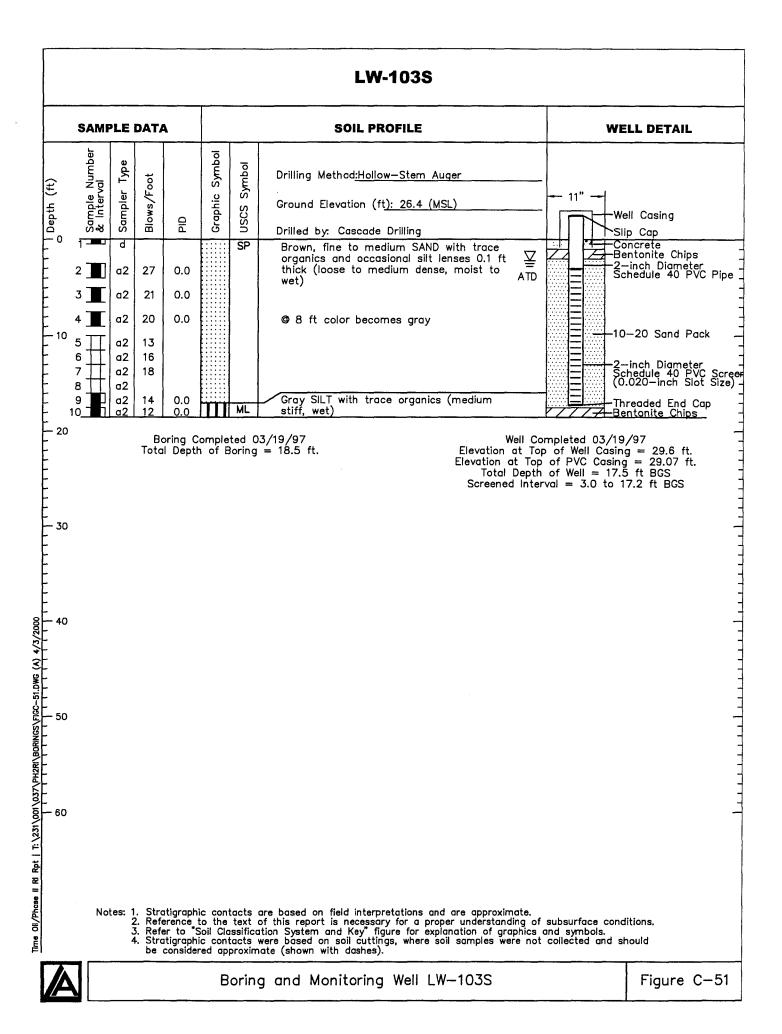


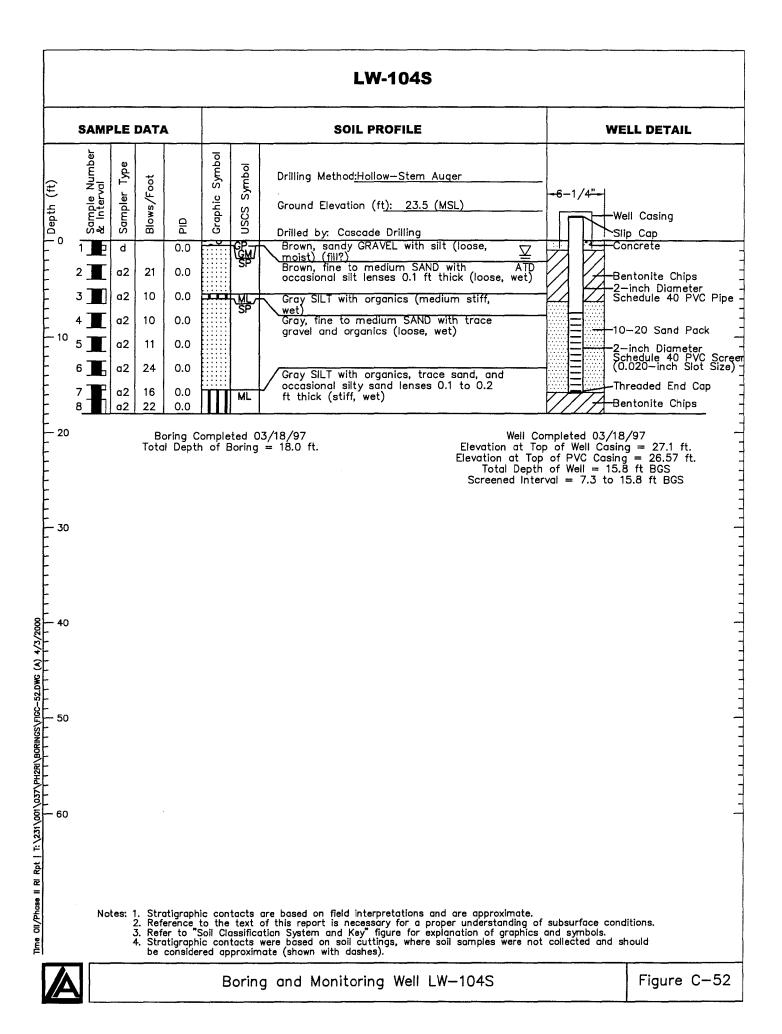


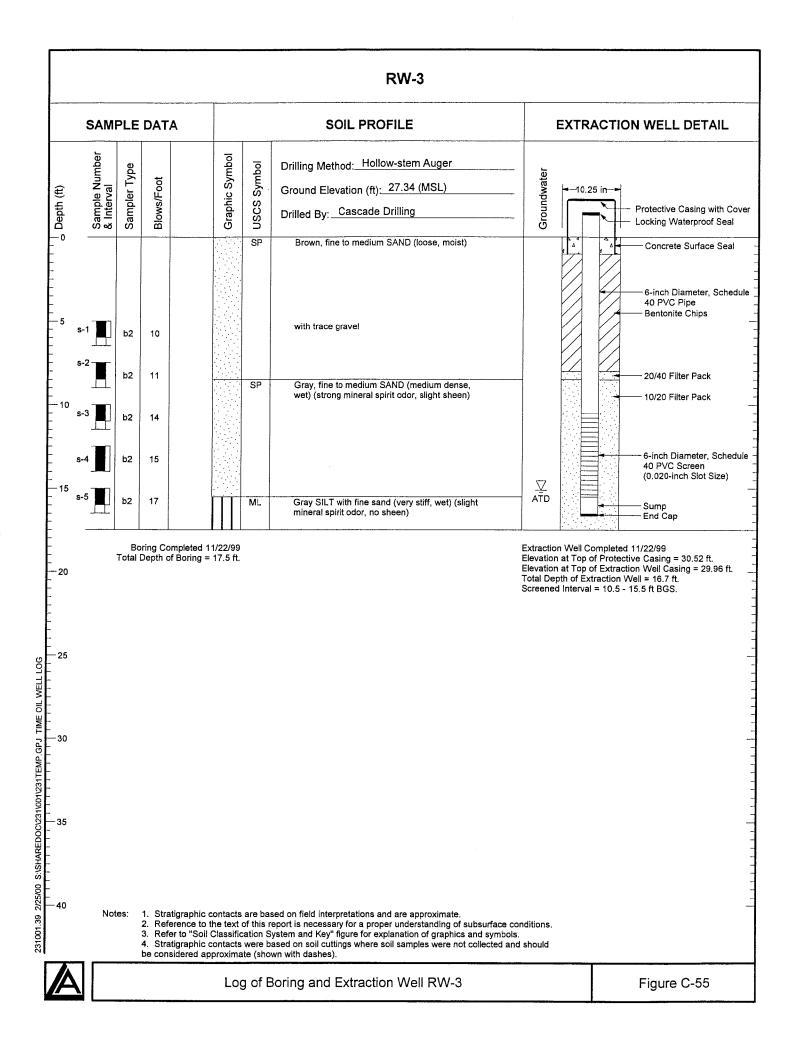


Boring and Monitoring Well LW-102S

Figure C-50







## **Water Level Measurements**

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
Shallow Wells:							
В	03/25/1997		29.04	NM		MM	Couldn't remove cap
В	03/31/1997		29.04	MM		NM	Couldn't remove cap
В	07/16/1997	08:30	29.04	11.02	18.02		
В	10/21/1997	16:35	29.04	13.39	15.65		
В	01/27/1998	12:15 17:56	29.04 29.04	11.53 12.51	17.51 16.53		
B B	05/18/1998 08/17/1998	11:02	29.04	14.40	14.64		
В	11/13/1998	10:24	29.04	14.38	14.66		
В	02/16/1999	13:36	29.04	9.69	19.35		
В	05/18/1999	15:52	29.04	11.72	17.32		
В	09/21/1999	12:21	29.04	15.18	13.86		
В	12/06/1999	14:37 10:57	29.04 29.04	13.00 11.84	16.04 17.20		
B B	02/16/2000 05/23/2000	17:31	29.04	13.22	15.82		
В	08/29/2000	14:23	29.04	15.32	13.72		
В	11/09/2000	13:31	29.04	15.29	13.75		
В	02/12/2001	15:25	29.04	13.68	15.36		
В	06/04/2001	12:49	29.04	14.18	14.86		
В	08/16/2001	11:54	29.04	15.80	13.24		
В	11/28/2001 02/27/2002	12:44	29.04 29.04	13.80 12.27	15.24 16.77		
B B	02/27/2002	14:33 15:05	29.04	13.38	15.66		
В	08/26/2002	16:59	29.04	14.02	15.02		
В	11/13/2002	09:01	29.04	13.90	15.14		
В	02/11/2003	10:13	29.04	12.85	16.19		
В	05/08/2003	08:11	29.04	12.27	16.77		
В	08/27/2003	15:30	29.04	14.70	14.34	4400	
B1	03/25/1997	10:48	29.74				Couldn't remove cap
B1	03/31/1997		29.74				Couldn't remove cap
B1	07/16/1997	07:49	29.74	11.01	18.73		
B1	10/21/1997	16:33	29.74	13.56	16.18		
B1	01/27/1998	12:10	29.74	11.68	18.06		
B1	05/18/1998	17:55	29.74 29.74	12.76 14.15	16.98 15.59	****	
B1	08/17/1998 11/13/1998	11:04 10:21	29.74	15.05	14.69		٧
B1 B1	02/16/1999	13:33	29.74	9.59	20.15	****	
B1	05/18/1999	15:51	29.74	11.79	17.95		
B1	09/21/1999	12:19	29.74	14.63	15.11		
B1	12/06/1999	14:38	29.74	14.25	15.49		
B1	02/16/2000	10:55	29.74	12.20	17.54		
B1	05/23/2000 08/29/2000	17:32 14:22	29.74 29.74	13.25 14.93	16.49 14.81		
B1 B1	11/09/2000	13:30	29.74	15.56	14.18		
B1	02/12/2001	15:26	29.74	15.19	14.55		
B1	06/04/2001	12:50	29.74	15.06	14.68		
B1	08/16/2001	11:55	29.74	15.72	14.02		
B1	11/28/2001	12:45	29.74	15.47	14.27		
B1	02/27/2002	14:34 11:06	29.74 29.74	12.15 12.28	17.59 17.46		
B1 B1	03/05/2002 04/05/2002	08:42	29.74	12.40	17.34		
B1	05/29/2002	00:00	29.74	13.20	16.54		
B1	06/27/2002	15:06	29.74	13.77	15.97		
B1	08/26/2002	17:00	29.74	14.79	14.95		
B1	11/13/2002	09:02	29.74	16.00	13.74		
B1	02/11/2003	10:15	29.74	12.86	16.88 17.49		
B1	05/08/2003 08/27/2003	08:12 15:31	29.74 29.74	12.25 14.79	17.49 14.95		
B1 B1	10/23/2003	14:07	29.74	15.61	14.13		
B1	02/19/2004	14:13	29.74	12.39	17.35		
B1	06/09/2004	09:01	29.74	14.10	15.64		
B1	08/10/2004	12:21	29.74	15.18	14.56		
B1	11/18/2004	09:04	29.74	15.70	14.04		
C	03/25/1997	12:32	28.89	5.56	23.33		
C C	03/25/1997	11:38	28.89	6.16	22.73		
C	07/16/1997	08:47	28.89	8.28	20.61		
C	10/21/1997	15:15	28.89	10.00	18.89		
Ċ	01/27/1998	13:41	28.89	7.98	20.91		
С	05/18/1998	18:08	28.89	9.54	19.35		
C	08/17/1998	11:11	28.89	dry	10.52		
C	11/13/1998	10:36	28.89 28.89	10.36 5.91	18,53 22.98		
C	02/16/1999 05/18/1999	13:58 16:04	28.89	7.90	20.99		
$\sim$	00,10,1000	10.04	20.00				

 $7/19/05\ \Edmdata\wproc\231\009\132\Phill\ Ri\ 071905\Phill\ Ri\ Rpt_Tb\ B-1\ Quarterly\ Event\ Source: S:/Sheets/TimeOil/WaterLvl/GWL\ All$ 

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
С	09/21/1999	12:44	28.89	dry			
C	12/06/1999	14:50	28.89	9.82			Water in endcap
Ċ	02/16/2000	09:51	28.89	8.78	20.11		
С	05/23/2000	17:55	28,89	dry			
C	08/29/2000	14:33	28.89	dry			D=0
C	11/09/2000	13:47	28.89	9.94	18.95		Dry?
С	02/12/2001	15:08	28.89	dry			
С	06/04/2001	13:25	28.89	dry		****	
С	08/16/2001	12:11	28.89	dry		****	
C	11/28/2001	13:03	28.89	dry	10.05		
C	02/27/2002	14:44	28.89 28.89	8.94	19.95	****	
C	06/27/2002 08/26/2002	15:36 17:31	28.89	dry dry			
C	11/13/2002	09:25	28,89	dry			
C	02/11/2003	10:46	28.89	dry			1" water
C	05/08/2003	08:35	28,89	8.53	20.36		
C	08/27/2003	15:08	28.89	dry			
-							
D	03/25/1997	12:25	30.04	8.32	21.72	****	
D	03/31/1997	11:31	30.04	8,66	21.38		
D	07/16/1997	08:35	30.04	10.45	19.59		
D	10/21/1997	17:10	30.04	13.27	16.77		
D	01/27/1998	13:31	30.04	10.72	19.32 17.81		
D	05/18/1998	17:36	30.04	12.23 13.83	16.21		
D .	08/17/1998	10:57 09:05	30.04 30.04	15.01	15.03		
D	11/13/1998 02/16/1999	13:45	30.04	8.50	21.54		
D D	05/18/1999	15:59	30.04	11.00	19.04		
D	09/21/1999	12:37	30.04	14.41	15.63	****	
D	12/06/1999	14:46	30.04	14.04	16.00		
D	02/16/2000	09:55	30.04	11.50	18.54		
D	05/23/2000	12:56	30.04	12.74	17.30		
Ď	08/29/2000	14:35	30.04	14.70	15.34		
D	11/09/2000	13:43	30.04	15.49	14.55		
D	02/12/2001	15:12	30.04	14.99	15.05		
D	06/04/2001	12:35	30.04	14.95	15.09		
D	08/16/2001	11:46	30.04	15.64	14.40		
D	11/28/2001	12:43	30.04	15.45	14.59		
D	02/27/2002	14:21	30.04	11.37	18.67		
D	03/05/2002	11:00	30.04	11.51	18.53		
D	04/05/2002	08:45	30.04 30.04	11.65 12.73	18,39 17,31		
D	05/29/2002 06/27/2002	00:00 15:00	30.04	13.43	16.61		
D D	08/26/2002	17:04	30.04	14.68	15.36		
D	11/13/2002	09:19	30.04	15.96	14.08		
D	02/11/2003	10:41	30.04	12.10	17.94		
D	05/08/2003	08:30	30.04	11.48	18.56		
D	08/27/2003	15:03	30.04	14.60	15.44		
D	10/23/2003	13:50	30.04	15.54	14.50		
D	02/19/2004	14:22	30.04	11.83	18.21	****	
D	06/09/2004	09:28	30.04	13.78	16.26		
D	08/10/2004	12:13	30.04	15.02	15.02		
D	11/18/2004	09:30	30.04	15.69	14.35		
_	08/18/1009	08:10	NA	14.77	NA		
F	08/18/1998	00.10	N/A	17.77	14/ (		Abandoned August 2003
•							
G	03/25/1997	11:57	30.24	14.49	15.75		
G	03/31/1997	09:13	30.24	14.01	16.23		
G	07/16/1997	07:37	30.24	14.30	15.94	****	
G	10/21/1997	16:20	30.24	dry		****	
G	01/27/1998	11:49	30.24	dry			
G	05/18/1998	17:30	30.24	dry			
G	08/17/1998	11:06	30.24 30.24	dry dry			
G	11/13/1998	09:53 13:14	30.24 30.24	dry dry			
G	02/16/1999 05/18/1999	14:50	30.24	dry			
G G	09/21/1999	11:30	30.24	dry			
G	12/06/1999	14:07	30.24	dry			
G	02/16/2000	10:19	30.24	dry			
G	05/23/2000	16:33	30.24	dry			
G	08/29/2000	13:18	30.24	drý			
Ğ	11/09/2000	12:30	30.24	dry			
G	02/12/2001	16:02	30.24	dry			
G	06/04/2001	11:41	30.24	dry			

7/19/05 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
G	08/16/2001	10:50	30.24	dry			
G	11/28/2001	11:33	30.24	dry			
G	02/27/2002	13:38	30.24	dry			
G	06/27/2002	14:13 16:05	30.24 30.24	dry dry			
G	08/26/2002 11/13/2002	07:37	30.24	dry			
G G	02/11/2003	08:58	30.24	dry			
G	05/08/2003	06:57	30.24	dry			
G	08/27/2003	13:38	30.24	dry			
G	10/23/2003	12:38	30.24	drý			
Ğ	02/19/2004	12:58	30.24	dry			
G	06/09/2004	07:54	30.24	dry			
G	08/10/2004	12:01	30.24	dry			
G	11/18/2004	09:16	30.24	dry			
Н	03/31/1997	11:51	27.08	5.42	21.66		
H	07/16/1997	08:44	27.08	7.29	19.79		
H	10/21/1997	17:45	27.08	10.08	17.00		
H	01/27/1998	13:45	27.08	7.56	19.52		
Н	05/18/1998	17:50	27.08	9.06	18.02		
Н	08/17/1998	09:15	27.08	10,68	16.40		
H	11/13/1998	10:54	27.08	11.84	15.24		
Н	02/16/1999	13:50	27.08	5.35	21.73		
Н	05/18/1999	15:41	27.08	7.78	19.30		
Н	09/21/1999	12:15	27.08	11.23	15.85		
H	12/06/1999	15:13	27.08	10.91	16.17		
H	02/16/2000	10:52	27.08	8.28	18.80		
H	05/23/2000	17:20	27.08	9.48	17.60 15.53		
H	08/29/2000	14:06	27.08	11.55 12.34	14.74		
H	11/09/2000 02/12/2001	13:23	27.08 27.08	11.88	15.20		
H	06/04/2001	15:36 12:27	27.08	11.81	15.27		
<b>Н</b> Н	08/16/2001	11:41	27.08	12.57	14.51		
H	11/28/2001	12:34	27.08	12.39	14.69		
H	02/27/2002	14:18	27.08	8.14	18.94		
H	03/05/2002	10:58	27.08	8.28	18.80		
H	04/05/2002	09:10	27.08	8.45	18.63		
Н	05/29/2002	00:00	27.08	9.38	17.70		
Н	06/27/2002	14:51	27.08	10.25	16.83		
Н	08/26/2002	17:00	27.08	11.54	15.54		
Н	11/13/2002	09:12	27.08	12.83	14.25		
Н	02/11/2003	10:33	27.08	8.96	18.12		
Н	05/08/2003	08:24	27.08	8.24	18.84		
H	08/27/2003	15:02	27.08	11.48	15.60 14.67		
H	10/23/2003	13:42	27.08	12.41	17.37		
H	02/19/2004 06/09/2004	14:35 09:16	27.08 27.08	9.71 10.61	16.47		
H	08/10/2004	11:33	27.08	11.93	15.15		
H H	11/18/2004	09:36	27.08	12.54	14.54		
							O
J1	03/25/1997	12:15	29.70	8.78	20.92		Orange/brown algae
J1	03/31/1997	11:19	29.70	9.02	20.68		
J1	07/16/1997	08:22	29.70	10.49	19.21		
J1	10/21/1997	16:58	29.70	13.10 11.03	16.60 18.67		
J1	01/27/1998	13:15	29.70 29.70	12.27	17.43		
J1	05/18/1998 08/17/1998	18:01 11:00	29.70 29.70	13.78	15.92		
J1	11/13/1998	10:30	29.70	14.77	14.93		
J1	02/16/1999	13:37	29.70	8.91	20.79		
J1 J1	05/18/1999	15:46	29.70	11.19	18.51		
J1	09/21/1999	12:28	29.70	14.36	15.34		
J1	12/06/1999	15:07	29.70	13.95	15.75		
J1	02/16/2000	11:05	29.70	11.67	18.03		
J1	05/23/2000	17:27	29.70	12.78	16.92		
J1	08/29/2000	14:14	29.70	14.58	15.12		
J1	11/09/2000	13:25	29.70	15.30	14.40		
J1	02/12/2001	15:22	29.70	14.87	14.83		
J1	06/04/2001	12:39	29.70	14.83	14.87		
J <b>1</b>	08/16/2001	11:52	29.70	15.48	14.22		
J†	11/28/2001	12:35	29.70	15.23	14.47		
J1	02/27/2002	14:30	29.70	11.62	18.08		
J1	03/05/2002	11:04	29.70	11.76	17.94		
J1	04/05/2002	08:40	29.70 29.70	11.87 12.77	17.83 16.93		
J1 J1	05/29/2002 06/27/2002	00:00 15:02	29.70 29.70	13.40	16.30		
	00/2//2002	12.02	23.10	10.40	10.00		

 $7/19/05\ \Edmdata\wproc\231\009\132\Phiii Ri 071905\Phiii Ri Rpt_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvt//GWL All$ 

1	Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
J1	J1	08/26/2002	16:54	29.70	14.51	15.19	****	
J1								
1								
J1 102329003 1552 22.70 15.31 14.99 —  J1 002192004 14.16 25.70 11.98 17.82 —  J1 002192004 14.16 25.70 14.98 1.05.91 15.82 —  J1 11/18/2004 09.98 25.70 14.98 1.05.91 14.25 —  K 02851957 10.08 25.27 14.98 1.05.91 14.25 —  K 02851957 10.08 25.27 15.45 14.25 —  K 02851957 10.08 25.29 29.42 15.03 15.35 —  K 02761959 15.50 29.42 15.03 15.25 —  K 02761959 15.50 29.42 15.03 15.45 18.98 —  K 02761959 15.50 29.42 15.04 15.45 18.98 —  K 02761959 15.50 29.42 15.45 15.45 18.98 —  K 02761959 15.50 29.42 15.15 18.25 18.25 —  K 02761959 15.25 29.42 15.25 18.25 18.25 —  K 02761959 15.25 29.42 18.25 18.25 18.25 —  K 02761959 15.25 29.42 18.25 18.25 18.25 —  K 02								
J.   C2/19/2004   14-18   29/70   11-88   17-82								
J1   96/99/2014   99/99   29/70   13/1   15/99     J1   98/90/2014   20/90   20/90   14/86   14/85     J1   98/90/2014   20/90   20/90   14/86   14/85     J1   98/90/2014   20/90   20/90   14/86   14/85     K   93/91/1967   98/92   20/42   8.46   20/96     K   93/91/1967   98/92   20/42   8.46   20/96     K   93/91/1968   12/97   20/94   10/96   10/96     K   93/91/1968   12/97   20/94   10/96   10/96     K   93/91/1968   12/97   20/94   11/97   17/86     K   93/91/1968   12/97   20/94   11/97   11/96     K   93/91/1968   12/97   20/94   11/97   11/96     K   93/91/1968   10/90   29/94   13/94   10/96     K   93/91/1969   13/90   29/94   13/94   13/94     K   93/91/1969   13/90   29/94   13/94   13/94     K   93/91/1969   13/90   29/94   13/94   13/94     K   93/91/1969   13/90   29/94     K   93/91/1969								
1								
K	J1							On 8/03, DTW was 14.75; 8/10/04 reading changed from 15.86 to 1
K	J1	11/18/2004	09:03	29.70		14.25		
K								
K		07/16/1997						
K								
K 0817/1998 10:50 29:42 13:34 15:08 K 11/13/1998 10:14 29:42 14:30 15:12 C2/16/1999 18:55 29:42 84:1 12:101 K 03/16/1999 18:55 29:42 10:88 18:74 K 03/16/1999 18:55 29:42 11:15:18:27 K 03/16/1999 18:56 29:42 11:15:18:27 K 03/16/1999 18:56 29:42 11:15:18:27 K 03/16/1999 18:56 29:42 11:15:18:17 K 03/16/1999 18:41 29:42 14:55 16:07 K 03/16/1999 18:23 29:42 11:15:18:17 K 03/16/1999 18:23 29:42 11:15:18:17 K 03/16/1999 18:41 29:42 18:4								
K								
K 02/14/1989 15.55 29.42 8.41 21.01								
K 05/18/1989 15:00 29:42 10:88 18:74								
K								
K								
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L 05/18/1999 16:03 28.10 7.62 20.48 L 09/21/1999 12:43 28.10 12:30 15.80 L 12/06/1999 14:49 28.10 9.51 18.59 L 02/16/2000 09:49 28.10 7.13 20.97 L 05/23/2000 17:54 28.10 9.11 18.99 L 08/29/2000 14:32 28.10 12.66 15.44 L 11/09/2000 13:46 28.10 13.56 14.54 L 02/12/2001 15:07 28.10 13.04 15.06 L 06/04/2001 13:24 28.10 12.78 15.32 L 08/16/2001 12:10 28.10 13.66 14.44 L 11/28/2001 13:02 28.10 12.34 15.76 L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.39 20.71 L 03/05/2002 08:39 28.10 7.63 20.47 L 04/05/2002 08:39 28.10 7.63 20.47 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 08/26/2002 17:30 28.10 12.56 15.54 L 08/26/2002 17:30 28.10 14.00 14.10	L							
L 09/21/1999 12:43 28.10 12:30 15.80 L 12/06/1999 14:49 28.10 9.51 18.59 L 02/16/2000 09:49 28.10 7.13 20.97 L 05/23/2000 17:54 28.10 9.11 18.99 L 08/29/2000 14:32 28.10 12.66 15.44 L 11/09/2000 13:46 28.10 13.56 14.54 L 02/12/2001 15:07 28.10 13.04 15.06 L 06/04/2001 13:24 28.10 12.78 15.32 L 08/16/2001 12:10 28.10 13.66 14.44 L 11/28/2001 13:02 28.10 12.34 15.76 L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.63 20.47 L 04/05/2002 08:39 28.10 7.63 20.47 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 08/26/2002 09:26 28.10 14.00 14.10	L							
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L 11/09/2000 13:46 28.10 13.56 14.54 L 02/12/2001 15:07 28.10 13.04 15.06 L 06/04/2001 13:24 28.10 12.78 15.32 L 08/16/2001 13:02 28.10 13.66 14.44 L 11/28/2001 13:02 28.10 7.16 20.94 L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.39 20.71 L 04/05/2002 08:39 28.10 7.63 20.47 L 05/29/2002 00:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 08/26/2002 09:26 28.10 14.00 14.10	L							
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L 06/04/2001 13:24 28.10 12.78 15.32 L 08/16/2001 12:10 28.10 13.66 14.44 L 11/28/2001 13:02 28.10 12.34 15.76 L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.39 20.71 L 04/05/2002 08:39 28.10 7.63 20.47 L 05/29/2002 00:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	L							
L 08/16/2001 12:10 28.10 13.66 14.44 L 11/28/2001 13:02 28.10 12.34 15.76 L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.39 20.71 L 04/05/2002 08:39 28.10 7.63 20.47 L 05/29/2002 00:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	1							
L 11/28/2001 13:02 28.10 12.34 15.76 L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.39 20.71 L 04/05/2002 08:39 28.10 7.63 20.47 L 05/29/2002 0:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	Ĺ							
L 02/27/2002 14:42 28.10 7.16 20.94 L 03/05/2002 11:12 28.10 7.39 20.71 L 04/05/2002 08:39 28.10 7.63 20.47 L 05/29/2002 00:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	Ĺ							
L 04/05/2002 08:39 28.10 7.63 20.47 L 05/29/2002 00:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	L	02/27/2002		28.10	7.16	20.94		
L 05/29/2002 00:00 28.10 9.09 19.01 L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	L							
L 06/27/2002 10:38 28.10 10.11 17.99 L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	L							
L 08/26/2002 17:30 28.10 12.56 15.54 L 11/13/2002 09:26 28.10 14.00 14.10	L.							
L 11/13/2002 09:26 28.10 14.00 14.10	Ĺ							
	L							
	L	02/11/2003	10:47	28.10	7.17	20.93	-	

7/19/05 \\Edmdata\wproc\231\009\132\PhiII RI 071905\PhiII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvl/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
L	05/08/2003	08:34	28.10	7.01	21.09		
L	08/27/2003	15:09	28.10	15.20	12.90		
L I	10/23/2003 02/19/2004	14:20 13:57	28.10 28.10	13.56 6.84	14.54 21.26		
Ĺ	06/09/2004	09:35	28.10	11.10	17.00		
L	08/10/2004	12:27	28.10	13.00	15.10		
L	11/18/2004	09:42	28.10	13.77	14.33		
N	03/25/1997	11:48	31.40	14.05	17.35		
N	03/31/1997	08:59	31.40	14.26	17.14		Hydrocarbon odor, product
N	07/16/1997	07:20	31.40	16.03	16.33	1.20	Light brown color; thick coating on probe
N N	10/21/1997 10/23/1997	16:09 17:20	31.40 31.40	16.46 16.48	14.94 14.92		No product - strong petroleum odor  No product - strong petroleum odor
N	01/27/1998	11:13	31.40	15.01	16.41	0.02	The product offering potrologin oder
Ν	05/18/1998	17:20	31.40	16.39	15.06	0.06	
N	08/17/1998	10:40	31.40	17.16	14.26	0.02	Thin coat of thick product
N	11/13/1998	09:48	31.40	17.83	13.58	0.01	Otrong natraloum odor
N N	02/16/1999 05/18/1999	12:55 14:47	31.40 31.40	14.09 15,79	17.53 15.64	0,27 0,04	Strong petroleum odor
N	09/21/1999	11:23	31.40	17.39	14.02	0.01	
N	12/06/1999	14:00	31.40	16.57	14.83		
N	02/16/2000	10:10	31.40	15.69	15.71		
N	05/23/2000	16:24	31.40	16.42	14.98		Strong petroleum odor, no product
N N	08/29/2000 11/09/2000	13:07 12:26	31.40 31.40	17.61 18.23	13.79 13.19	0.03	
N	02/12/2001	15:49	31.40	17.64	13.76		
N	06/04/2001	11:31	31.40	17.58	13.82		
N	08/16/2001	10:29	31.40	18.08	13.32		Trace product
N	11/28/2001	11:27	31.40	18.06	13.34		Trace product
N N	02/27/2002 04/05/2002	13:25 08:09	31.40 31.40	15.76 15.88	15.64 15.52		
N	05/29/2002	00:00	31.40	16.42	14.98		
N	06/27/2002	14:12	31.40	16.80	14.60		
N	08/26/2002	15:56	31.40	17.51	13.89		
N	11/13/2002	07:27	31.40	18.44	12.98	0.03	Product present
N N	02/11/2003	08:49 06:51	31.40 31.40	15.33 15.71	16.07 15.69		
N	05/08/2003 08/27/2003	13:33	31.40	17.54	13.86		
N	10/23/2003	12:08	31.40	18.18	13.22		
N	02/19/2004	12:21	31.40	15.79	15.61		
N	06/09/2004	07:36	31.40	17.04	14.36		
N N	08/10/2004 11/18/2004	10:55 08:38	31.40 31.40	17.72 dry	13,68		
				•			
P P	03/25/1997 03/31/1997	11:45 08:55	29,96 29,96	12.88 12.94	17.08 17.02		Hydrocarbon odor, product
P	07/16/1997	07:15	29.96	14.02	16.08	0.17	Light coating on probe; light brown color
P	10/21/1997	16:05	29.96	15.23	14.73		No product - strong petroleum odor
P	10/23/1997	17:25	29.96	15.21	14.75		No product - strong petroleum odor
P	01/27/1998	11:09	29.96	13.87	16.09		Trans of product on proba
P P	05/18/1998 08/17/1998	17:18 10:37	29.96 29.96	13.08 15.82	16.88 14.15	0.01	Trace of product on probe Sheen on probe, strong petroleum odor
P	11/13/1998	09:46	29.96	16.63	13.37	0.05	Strong gasoline odor
Р	02/16/1999	12:52	29.96	12.91	17.10	0.06	Strong petroleum odor
Р	05/18/1999	14:43	29.96	14.68	15.38	0.13	
P	09/21/1999	11:20	29.96	16.08	13.89	0.01	
P P	12/06/1999 02/16/2000	13:55 10:08	29.96 29.96	15.41 14.51	14,55 15.45		
P	05/23/2000	16:21	29.96	15.15	14.81		Trace of product on surface
Р	08/29/2000	13:04	29.96	16.26	13.71	0.01	
P	11/09/2000	12:24	29.96	16.98	13.00	0.03	
P	02/12/2001	15:46		16.31	13.65		Trans product
P P	06/04/2001 08/16/2001	11:27 10:28	29.96 29.96	16.26 16.75	13.70 13.21		Trace product
P	11/28/2001	11:24		17.01	12.95		
P	02/27/2002	13:22		14.60	15.44	0.10	Strong ethanol-like odor
Ρ	04/05/2002	08:07	29.96	14.70	15.34	0.10	
P	05/29/2002	00:00		15.00	14.96		Trace product
P	06/27/2002	14:11		15.49	14.47		
P P	08/26/2002 11/13/2002	15:54 07:25		16.15 16.99	13.81 13.00	0.04	Product present
P	02/11/2003	08:44		14.13	15.84	0.01	Product present
P	05/08/2003	06:47		15.53	14.44	0.01	Product barely present
P	08/27/2003	13:30		16.19	13.77		
P	10/23/2003	12:05	29.96	16.60	13.38	0.02	Trace product

7/19/05 \\Edmdata\\wproc\231\009\132\\PhIII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

P P	02/19/2004	12:19					
			29.96	14.56	15.40		
P	06/09/2004	07:35	29.98	15.70	14.28	****	New reference elevation July 2004
P	08/10/2004 11/18/2004	10:53 08:37	29.98 29.98	16.40 dry	13.58		
Г	11/10/2004	06.57	25.50	ury			
Q	03/25/1997	11:42	30.36	13.55	16.81		
Q	03/31/1997	08:52	30.36	13.54	16.82		Hydrocarbon odor
Q	07/16/1997	07:10	30.36	14.55	15.83	0.02	Light coating on probe, light brown color
Q	10/21/1997	16:04 17:29	30.36	15.70	14.66	****	No product - strong petroleum odor
Q Q	10/23/1997 01/27/1998	11:05	30.36 30.36	15.69 14.48	14.67 15.88		No product - strong petroleum odor
Q .	05/18/1998	17:16	30.36	15.58	14.78		
Q	08/17/1998	10:35	30.36	16.27	14.09		Slight sheen on probe; no product, strong petroleum odor
Q	11/13/1998	09:44	30.36	17.01	13,36	0.01	Strong gasoline odor
Q	02/16/1999	12:49	30.36	13.61	16.76	0.01	Strong petroleum odor
Q	05/18/1999	14:40	30.36	15.13	15.23		Strong odor when cap removed
Q Q	09/21/1999 12/06/1999	11:17 13:53	30,36 30,36	16.51 15.88	13.85 14.48		
Q	02/16/2000	10:06	30.36	15.02	15.34		Film of product
ã	05/23/2000	16:19	30.36	15.64	14.72		Strong petroleum odor, no product
a a	08/29/2000	13:01	30.36	16.69	13.67		÷ (
Q	11/09/2000	12:23	30.36	17.50	12.86		Trace of product
Q	02/12/2001	15:45	30.36	16.71	13.65		
Q	06/04/2001	11:25	30.36	16.66	13.70		Trans product
Q Q	08/16/2001 11/28/2001	10:26 11:21	30,36 30,36	17.15 17.76	13.21 12.94	0.42	Trace product
Q	02/27/2002	13:20	30.36	15.07	15.29	0.42	Strong petroleum odor, no product
Q Q	04/05/2002	08:05	30.36	15.23	15.13		Trace product
<u>a</u>	05/29/2002	00:00	30.36	15.53	14.83		Trace product
Q	06/27/2002	14:10	30.36	15.95	14.41		Trace product
Q	08/26/2002	15:52	30.36	16.60	13.76		
Q	11/13/2002	07:30	30.36	17.50	12.87	0.01	Product present
Q	02/11/2003	08:47	30.36	14.67	15.69		
Q Q	05/08/2003 08/27/2003	06:48 13:28	30.36 30.36	15.00 16.60	15.54 13.76	0.22	
Q	10/23/2003	12:03	30.36	17.50	13.05	0.24	
Q Q	02/19/2004	12:17	30.36	15.07	15.29	0.27	Trace product
Q	06/09/2004	07:34	30.36	16.15	14.21		,
Q	08/10/2004	10:52	30.36	16.81	13.55	****	
Q	11/18/2004	08:35	30,36	17.55	13.01	0.25	
LW001S	03/31/1997	11:12	27.96	6.65	21.31		
LW001S	07/16/1997	08:15	27.96	8,34	19.62		
LW001S	10/21/1997	16:53	27.96	11.02	16.94		
LW001S	01/27/1998	13:00	27.96	8.75	19.21		
LW001S	05/18/1998	17:40	27.96	9.15	18.81		
LW001S LW001S	08/17/1998 11/13/1998	10:54 10:02	27.96 27.96	11.67 12.76	16.29 15.20	****	•
LW001S	02/16/1999	13:24	27.96	6.60	21.36		
LW001S	05/18/1999	15:38	27.96	8.92	19.04		
LW001S	09/21/1999	12:10	27.96	12.20	15.76		
LW001S	12/06/1999	14:33	27.96	11.86	16.10		
LW001S	02/16/2000	10:50	27.96	9.42	18.54		
LW001S	05/23/2000	17:18	27.96	10.52	17.44		
LW001S LW001S	08/29/2000 11/09/2000	13:58 13:17	27.96 27.96	12.51 13.26	15,45 14.70		
LW001S LW001S	02/12/2001	15:33	27.96 27.96	12.82	15.14		
LW001S	06/04/2001	12:24	27.96	12.77	15.19		
LW001S	08/16/2001	11:37	27.96	13.45	14.51		
LW001S	11/28/2001	12:28	27.96	13.25	14.71		
LW001S	02/27/2002	14:19	27.96	9.31	18.65		
LW001S	03/05/2002	10:56	27.96	9.45	18.51		
LW001S LW001S	04/05/2002 05/29/2002	09:08 00:00	27.96 27.96	9.60	18.36 17.47		
LW 001S LW 001S	06/27/2002	14:50	27.96 27.96	10.49 11.26	16.70		
LW001S	08/26/2002	17:11	27.96	12.47	15.49		
LW001S	11/13/2002	09:07	27.96	13.72	14.24		
_W001S	02/11/2003	10:25	27.96	10.11	17.85		
_W001S	05/08/2003	08:20	27.96	9.41	18.55		
_W001S	08/27/2003	14:51	27.96	12.46	15.50		
_W001S	10/23/2003	13:58	27.96	13.32	14.64		
_W001S	02/19/2004	14:28	27.96	9.81	18.15		
_W001S _W001S	06/09/2004 08/10/2004	09:20 11:30	27.96 27.96	11.60 12.86	16.36 15.10		

7/19/05 \\Edmdata\\wproc\231\009\132\\PhiII RI 071905\\PhiII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
	00/05/4007	40.00				· · · · · · · · · · · · · · · · · · ·	
LW002S LW002S	03/25/1997 03/31/1997	12:22 11:27	29.56 29.56	8.06 8.34	21.50 21.22		
LW002S	07/16/1997	08:33	29.56	10.05	19.51		
LW002S	10/21/1997	17:04	29.56	12.77	16.79		
LW002S	01/27/1998	13:25	29.56	10.39	19.17		
LW002S	05/18/1998	18:02	29.56	11.78	17.78		
LW002S	08/17/1998	10:56	29.56	13.38	16.18	****	
LW002S	11/13/1998	10:32	29.56	14.47	15.09		
LW002S LW002S	02/16/1999 05/18/1999	13:42 15:45	29.56 29.56	8.27 10.63	21.29 18.93		
LW002S	09/21/1999	12:34	29.56	13.95	15.61		
LW002S	12/06/1999	15:11	29.56	13,54	16.02		
LW002S	02/16/2000	10:38	29.56	11.08	18.48		
LW002S	05/23/2000	17:24	29,56	12.29	17.27		
LW002S	08/29/2000	14:12	29.56	14.23	15.33		
LW002S	11/09/2000	13:04	29.56	15.00	14.56		
LW002S LW002S	02/12/2001 06/04/2001	15:30 12:34	29.56 29.56	14.52 14.46	15.04 15.10		
LW002S	08/16/2001	11:45	29.56	15.16	14.40		
LW002S	11/28/2001	12:41	29.56	14.90	14.66		
LW002S	02/27/2002	14:19	29.56	11.02	18.54		
LW002S	03/05/2002	10:59	29.56	11.17	18.39		
LW002S	04/05/2002	08:47	29.56	11.33	18.23		
LW002S	05/29/2002	00:00	29.56	12.22	17.34		
LW002S	06/27/2002	14:56	29.56	13.00	16,56		
LW004S	03/31/1997	09:20	30.26	12.77	17.49		
LW004S	07/16/1997	07:40	30.26	14.66	15.60		
LW004S	10/21/1997	16:25	30.26	16.88	13.38		
LW004S	01/27/1998	12:00	30.26	15.13	15.13		
LW004S	05/18/1998	17:32	30.26	16.08	14.18		
LW004S	08/17/1998	11:07	30.26	17.30	12.96		
LW004S LW004S	11/13/1998 02/16/1999	09:56	30.26	17.96 13.10	12.30		
LW004S	05/18/1999	13:16 15:03	30.26 30.26	15.43	17.16 14.83		
LW004S	09/21/1999	11:44	30.26	17.61	12.65	****	
LW004S	12/06/1999	14:19	30.26	17.08	13.18		
LW004S	02/16/2000	10:31	30.26	15.84	14.42		
LW004S	05/23/2000	16:55	30.26	16.71	13.55		
LW004S	08/29/2000	13:39	30.26	17.78	12.48		
LW004S	11/09/2000	12:53	30.26	18.17	12.09		
LW004S LW004S	02/12/2001 06/04/2001	16:38 12:08	30.26 30.26	17.08 17.81	13.18 12.45		
LW004S	08/16/2001	11:14	30.26	18.39	11.87		
LW004S	11/28/2001	12:05	30.26	17.84	12.42	****	
LW004S	02/27/2002	14:01	30.26	15.82	14.44		
LW 004S	03/05/2002	11:35	30.26	15.95	14.31		
LW004S	04/05/2002	08:20	30.26	16.02	14.24		
LW004S	05/29/2002	00:00	30.26	16.74	13.52		
LW004S LW004S	06/27/2002 08/26/2002	14:39 16:31	30.26 30.26	16.89 17.68	13.37 12.58		
LW004S	11/13/2002	08:22		19.04	11.22		
LW004S	02/11/2003	09:31		16.03	14.23		
LW004S	05/08/2003	07:43		15.75	14.51		
LW004S	08/27/2003	13:59	30.26	17.87	12.39		
LW004S	10/23/2003	13;18		18,52	11.74		
LW004S	02/19/2004	13:46		16.49	13.77		
LW004S	06/09/2004	08:31		17.24	13.08		New reference elevation July 2004
LW004S LW004S	08/10/2004 11/18/2004	11:57 09:23		18.03 18.61	12.29 11.71		
L*************************************	11/10/2004	00.20	00.02	10.01	11.71		
LW005S	03/25/1997	12:29		10.57	20.22		
LW005S	03/31/1997	11:35		10.84	19.95		
LW005S	07/16/1997	08:53		12.29	18.50		
LW005S	10/21/1997	15:16		15.00	15.79		
LW005S LW005S	01/27/1998 05/18/1998	13:36 18:05		12.90 14.19	17.89 16.60		
LW005S LW005S	08/17/1998	11:09		15.54	15.25		
LW005S	11/13/1998	10:38		16.55	14.24		
LW005S	02/16/1999	13:16		10.59	20.20		
LW005S	05/18/1999	16:01	30.79	13.12	17.67		
LW005S	09/21/1999	12:40		16.00	14.79		
LW005S	12/06/1999	14:47		15.64	15.15		
LW005S	02/16/2000	09:56	30.79	13.54	17.25		

7/19/05 \\Edmdata\wproc\231\009\132\\PhIII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event

Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Landau Associates

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
LW005S	05/23/2000	17:51	30.79	14.80	15.99		
LW005S	08/29/2000	14:37	30.79	16.35	14.44		
LW005S	11/09/2000	13:45	30.79	16.98	13.81		
LW005S	02/12/2001	15:13	30.79	16.51	14.28		
LW 005S	06/04/2001	13:23	30.79	16.43	14.36		
LW005S	08/16/2001	12:07	30.79	17.03	13.76		
LW 005S	11/28/2001	13:01	30.79	16.94	13.85		
LW005S	02/27/2002	14:39	30.79	13.48	17.31 17.17		
LW 005S	03/05/2002	11:13	30.79 30.79	13.62 13.60	17.17		
LW005S LW005S	04/05/2002 05/29/2002	08:38 00:00	30.79	14.81	15.98		
LW005S	06/27/2002	10:43	30.79	15.15	15.64		
LW005S	08/26/2002	17:08	30.79	16.12	14.67		
LW005S	11/13/2002	09:22	30.79	17.39	13,40		
LW 005S	02/11/2003	10:43	30.79	13.95	16.84		
LW005S	05/08/2003	08:32	30.79	13.58	17.21		
LW005S	08/27/2003	15:07	30.79	16.11	14.68		
LW005S	10/23/2003	14:17	30.79	16.92	13.87		
LW005S	02/19/2004 06/09/2004	14:00 09:34	30.79 30.79	13.76 15.50	17.03 15.29		
LW 005S LW 005S	08/10/2004	12:25	30.79	16.48	14.31		
LW005S LW005S	11/18/2004	09:40	30.79	17.05	13.74		
21,0000							
LW007S	03/31/1997	11:05	28.10	6.75	21.35		
LW007S	07/16/1997	08:05	28.10	8.62	19.48		
LW007S	10/21/1997	16:45	28.10	11.26	16.84		
LW007S	01/27/1998	12:47	28.10	8.85 10.34	19.25 17.76		
LW007S	05/18/1998	17:48 10:48	28.10 28.10	11.85	16.25		
LW007S LW007S	08/17/1998 11/13/1998	10:12	28.10	12.90	15.20		Strong gasoline odor
LW007S	02/16/1999	13:53	28.10	6.81	21.29		- 33
LW007S	05/18/1999	15:23	28.10	9.14	18.96		
LW007S	09/21/1999	12:03	28.10	12.37	15.73		
LW007S	12/06/1999	14:27	28.10	12.00	16.10		
LW007S	02/16/2000	10:46	28.10	9.60	18.50		
LW007S	05/23/2000	17:09	28.10	10.70	17.40		
LW007S	08/29/2000	13:53	28.10	12.64	15.46 14.74		
LW007S	11/09/2000 02/12/2001	13:14 15:39	28.10 28.10	13.36 12.94	15.16		
LW007S LW007S	06/04/2001	12:17	28.10	12.87	15.23		
LW007S	08/16/2001	11:33	28.10	13.58	14.52		
LW007S	11/28/2001	12:22	28.10	13.34	14.76		
LW007S	02/27/2002	14:15	28.10	9.47	18.63		
LW007S	03/05/2002	10:52	28.10	9,62	18.48		
LW007S	04/05/2002	08:57	28.10	9.73	18.37		
LW007S	05/29/2002	00:00	28.10	10.63	17.47		
LW007S	06/27/2002	14:45	28.10	11.36 12.69	16.74 15.41		
LW007S	08/26/2002	17:18 09:16	28.10 28.10	13.82	14.28		
LW007S LW007S	11/13/2002 02/11/2003	10:37	28.10	10.18	17.92		
LW007S	05/08/2003	08:27	28.10	9.54	18.56		
LW007S	08/27/2003	14:58	28.10	12.62	15.48	2245	
LW007S	10/23/2003	13:39	28.10	13.45	14.65		
LW007S	02/19/2004	14:42	28.10	10.01	18.09		
LW007S	06/09/2004	09:25	28.10	11.75	16.35		
LW007S	08/10/2004	11:26	28.10	13.00 15.53	15.10 12.57		
LW 007S	11/18/2004	08:55	28.10	10,03	12.3/		
LW008S	05/18/1999	14:55	31.28	14.84	16.44		
LW008S	09/21/1999	12:24	31.28	16.94	14.34		
LW008S	12/06/1999	14:40	31.28	16.63	14.65		
LW008S	02/16/2000	10:16	31.28	15.18	16.10		
LW008S	05/23/2000	17:42	31.28	15.88	15.40		
LW008S	08/29/2000	14:26	31.28	17.06	14.22		
LW008S	11/09/2000	13:32	31.28	17.55 17.24	13.73 14.04		
LW008S	02/12/2001 06/04/2001	15:58 13:05	31.28 31.28	17.14	14.14		
LW008S LW008S	08/16/2001	12:00	31.28	17.70	13.58		
LW008S	11/28/2001	12:57	31.28	17.63	13.68	0.04	
LW008S	02/27/2002	14:37	31.28	15.12	16.16		
LW008S	03/05/2002	11:09	31.28	15.26	16.02		
LW008S	04/05/2002	08:17	31.28	15.34	15.94		
LW008S	05/29/2002	00:00	31.28	15.91	15.37		
LW008S	06/27/2002	15:21	31.28	16.21	15.07		
LW008S	08/26/2002	16:38	31.28	16.95	14.33		

7/19/05 \\Edmdata\wproc\231\009\132\PhiII RI 071905\PhiII RI Rpt\_Tb B-1 Quarterly Event

Source: S:/Sheets/TimeOil/WaterLvl/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
LW008S	11/13/2002	08:50	31.28	17.88	13.40		
LW008S	02/11/2003	09:48	31.28	15.57	15.71		
LW008S	05/08/2003	08:00	31.28	15.11	16.17		
LW008S	08/27/2003	14:25	31.28	16.97	14.31		
LW008S	10/23/2003	12:42	31,28	17.54	13.74		
LW008S	02/19/2004	15:03	31.28	15.34	15.94		
LW008S	06/09/2004	08:43	31.28	16.50	14.78		
LW008S	08/10/2004	12:05	31.28	17.23	14.05		
LW008S	11/18/2004	09:15	31.28	17.56	13.72		
LW009S	05/18/1999	14:57	31.04	19.58	11.46		Water level appears to be more representative of lower zone
LW009S	09/21/1999	11:36	31.04	dry	71.40		Water level appears to be more representative or lower zone
LW009S	12/06/1999	14:13	31.04	19.64			Water in endcap
LW009S	02/16/2000	10:24	31.04	19.59			Water in endcap
LW009S	05/23/2000	16:39	31.04	dry			
LW009S	08/29/2000	13:28	31.04	drý			
LW009S	11/09/2000	12:42	31.04	drý			
LW009S	02/12/2001	16:12	31.04	dry			
LW009S	06/04/2001	11:50	31.04	dry			
LW009S	08/16/2001	11:01	31.04	dry			
LW009S	11/28/2001	11:52	31.04	dry			
LW009S	02/27/2002	13:48	31.04	dry			
LW009S	03/05/2002	11:15	31.04	dry			
LW009S	04/05/2002	08:26	31.04	dry			
LW009S	05/29/2002	00:00	31.04	dry			
LW009S	06/27/2002	14:24	31.04	dry			
LW009S	08/26/2002	16:09	31.04	dry			
LW009S	11/13/2002	07:49	31.04	dry			December 1 DTM of 40 CO constitute 1 (No. 1)
LW009\$	02/11/2003	09:06	31.04	dry			Recorded DTW of 19.58; well most likely dry
LW009S	05/08/2003	07:11	31.04	dry		***	
LW009S	08/27/2003	13:48	31.04	dry	****		
LW009S LW009S	10/23/2003 02/19/2004	12:46 13:04	31.04 31.04	dry dry			
LW009S	06/09/2004	08:12	31.04	dry			
LW009S	08/10/2004	11:53	31.04	dry			
LW009S	11/18/2004	09:28	31.04	dry			
2,70000		00.20	01.01	u.,			
LW010S	05/18/1999	14:59	30.75	17.24	13.51		
LW010S	09/21/1999	11:38	30.75	19.13	11.62		
LW010S	12/06/1999	14:14	30.75	18.54	12.21		
LW010S	02/16/2000	10:26	30.75	17.62	13.13		
LW010S	05/23/2000	16:41	30.75	18.25	12.50		
LW010S	08/29/2000	13:30	30.75	dry			
LW010S	11/09/2000	12:45	30.75	dry		****	
LW010S	02/12/2001	16:14	30.75	dry			
LW010S	06/04/2001	11:53	30.75	dry			
LW010S	08/16/2001	11:03	30.75	dry			
LW010S	11/28/2001	11:54	30.75	dry	10.00		
LW010S LW010S	02/27/2002 03/05/2002	13:50 11:32	30.75 30.75	17.77 17.84	12.98 12.91		
LW010S	03/05/2002	08:24	30.75 30.75	17.84	12.93		
LW010S	05/29/2002	00:00	30.75	18.22	12.53		
LW010S	06/27/2002	14:28	30.75	18.27	12.48		
LW010S	08/26/2002	16:15	30.75	dry			
LW010S	11/13/2002	08:00	30.75	dry			
LW010S	02/11/2003	09:20	30.75	17.50	13.25		
LW010S	05/08/2003	07:32	30.75	17.68	13.07		
LW010S	08/27/2003	13:51	30.75	dry		****	
LW010S	10/23/2003	12:51	30.75	drý			
LW010S	02/19/2004	13:26	30.75	17.77	12.98		
LW010S	06/09/2004	08:22	30,75	18.67	12.08		
LW010S	08/10/2004	11:54	30.75	dry			
LW010S	11/18/2004	09:26	30.75	dry			
1101110	05/49/4000	15:10	20.40	11 47	17 69		
LW011S	05/18/1999	15:10	29.10	11.47	17.63		
LW011S	09/21/1999	11:51	29.10	14.23	14.87		
LW011S	12/06/1999	15:05	29.10	14.00	15.10 17.16		
LW011S LW011S	02/16/2000 05/23/2000	11:01 11:01	29.10 29.10	11.94 13.01	17.16 16.09		
LW011S	08/29/2000	14:55	29.10 29.10	14.51	14.59		
LW011S	11/09/2000	13:36		15.48	13.92	0.37	First occurrence of product in well.
LW011S	02/12/2001	15:18		14.62	14.48	0.57	. not observe to product in from.
LW011S	06/04/2001	13:12		14.65	14.45		
LW011S	08/16/2001	11:24		15.46	13.86	0.28	
LW011S	11/28/2001	12:51		15.10	14.00		Trace product
							•

7/19/05 \\Edmdata\\wproc\231\009\132\\PhIII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
			29.10	11.86	17.24		
LW011S	02/27/2002 03/05/2002	14:59 11:40	29.10	11.96	17.14		
LW011S LW011S	04/05/2002	08:34	29.10	12.07	17.03		
LW011S	05/29/2002	00:00	29.10	13.00	16.10		
LW011S	06/27/2002	15:09	29.10	13.40	15.70		
LW011S	08/26/2002	16:48	29.10	14.37	14.73		
LW011S	11/13/2002	08:54	29.10	15.53	13.57		
LW011S	02/11/2003	10:03	29.10	12.46	16.64		
LW011S	05/08/2003	08:07	29.10	11.91	17.19		
LW011S	08/27/2003	14:36	29.10	14.32	14.78		
LW011S	10/23/2003	14:12	29.10	15.12	13.98		
LW011S	02/19/2004	14:02	29.10	12.13	16.97		
LW011S	06/09/2004	08:56	29.10	13.72	15.38		
LW011S	08/10/2004	12:08	29.10	14.66	14.44		
LW011S	11/18/2004	09:08	29.10	15.33	13.84	0.09	
	05/00/0005	40.54	00.47	47.00	10.04		
LW013S	05/23/2000	16:51	30.17	17.23	12.94		
LW013S	08/29/2000	13:37	30.17	18.27 18.75	11.90 11.42		
LW013S	11/09/2000	12:51	30.17	18.26	11.91		
LW013S	02/12/2001	16:30	30.17 30.17	18.30	11.87		
LW013S	06/04/2001	12:06	30.17	18.81	11.36		
LW013S LW013S	08/16/2001 11/28/2001	11:13 12:03	30.17	18.37	11.80		
LW013S LW013S	02/27/2002	13:58	30.17	16.60	13.57		
LW013S	03/05/2002	11:33	30.17	16.68	13.49		
LW013S	04/05/2002	08:22	30.17	16.73	13.44		
LW013S	05/29/2002	00:00	30.17	17.30	12.87		
LW013S	06/27/2002	14:37	30.17	17.38	12.79		
LW013S	08/26/2002	16:30	30.17	18.11	12.06		
LW013S	11/13/2002	08:14	30.17	19.04	11.13		
LW013S	02/11/2003	09:30	30.17	16.57	13.60		
LW013S	05/08/2003	07:41	30.17	16.53	13,64		
LW013S	08/27/2003	13:57	30.17	18.27	11.90		
LW013S	10/23/2003	13:14	30.17	18.81	11.36		
LW013S	02/19/2004	13:40	30.17	16.62	13.55		
LW013S	06/09/2004	08:30	30.17	17.66	12.51		
LW013S	08/10/2004	11:55	30.17	18.33	11.84		
LW013S	11/18/2004	09:24	30.17	18.92	11.25		
LWOJOC	10/23/2003	11:54	27.72	16.62	11.10		
LW019S	02/19/2004	15:00	27.72	13.84	13.88		
LW019S LW019S	06/09/2004	07:27	27.72	15.46	12.26		
LW019S	08/10/2004	11:07	27.72	16.35	11.37		
LW019S	11/18/2004	08:51	27.72	17.18	10.54		
21,0100							
LW020S	10/23/2003	12:14	29.51	14.86	14.65		
LW020S	02/19/2004	14:45	29.51	12.55	16,96		
LW020S	06/09/2004	07:47	29.51	14.18	15.33		
LW020S	08/10/2004	11:05	29.51	14.90	14.61		
LW020S	11/18/2004	08:46	29.51	14.42	15.09		
	10/0-/	46.15	00.00	10.57	10.70		
LW021S	10/23/2003	12:16	30.29	16.57	13.72	1.03	
LW021S	02/19/2004	14:54	30.29	13.82	17.29	1.03	
LW021S	06/09/2004	07:44	30.29	15.36	15.02	0.11 0.17	
LW021S	08/10/2004	11:02	30.29	16.40 16.51	14.03 13.87	0.17	
LW021S	11/18/2004	08:43	30.29	16.51	10.07	0.11	
LW027S	10/23/2003	12:20	30.59	25.40	5.19		
LW027S LW027S	02/19/2004	12:44	30.59	22.07	9.07	0.69	
LW027S LW027S	06/09/2004	07:39	30.59	21.26	9.33		
LW027S	08/10/2004	10:58	30.59	24.56	6.13	0.12	
LW027S	11/18/2004	07:39	30.59	24.68	5.93	0.02	
22.0							
LW028S	10/23/2003	14:26	30.98	dry			
LW028S	02/19/2004	15:17	30.98	12.87	18.11		
LW028S	06/09/2004	09:52	30.98	15.15	15.83		
LW028S	08/10/2004	11:45	30.98	dry			
LW028S	11/18/2004	09:45	30.98	dry			
					40.5		
LW029S	10/23/2003	14:39	31.34	18.88	12.46		
LW029S	02/19/2004	15:30	31.34	16.52	14.82		
LW029S	06/09/2004	09:43	31.34	17.85	13.49		
LW029S	08/10/2004	11:50	31.34	18.56	12.78		
LW029S	11/18/2004	09:58	31.34	18.97	12.37		

7/19/05 \\Edmdata\\wproc\231\009\132\\PhiII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
LW030S	10/23/2003	14:41	30.08	17.91	12.17	***	
LW 030S	02/19/2004	15:32	30.08	15.58	14.50		
LW 030S	06/09/2004	09:46	30.08	16.91	13.17		
LW 030S	08/10/2004	11:52	30.08	17.62	12.46		
LW030S	11/18/2004	09:59	30.08	17.96	12.12		
2110000	11) 10/2001	00.00	00.00	17.00	12.12		
LIMONIO	40/00/0000	44.00	04.00	40.07	40.00		
LW031S	10/23/2003	14:30	31.26	18.87	12.39		
LW031S	02/19/2004	15:21	31.26	16.07	15.19		
LW031S	06/09/2004	09:56	31.26	17,67	13.59		
LW031S	08/10/2004	11:42	31.26	16.52	14.74		
LW031S	11/18/2004	09:50	31.26	18.93	12.33		
LVVOOTO	11/10/2004	03.30	31.20	10.50	12.00		
	4.0.00.000		20.74	47.00	40.00		
LW032S	10/23/2003	14:32	30.71	17.02	13.69		
LW032S	02/19/2004	15:29	30.71	13.59	17.12		
LW032S	06/09/2004	09:58	30.71	15.66	15.05		
LW032S	08/10/2004	11:46	30.71	16.67	14.04		
LW032S	11/18/2004	09:52	30.71	17.04	13.67		
LVVOOZO	11/10/2004	00.02	00,71	17.01	10.07		
Litteren	4.0/0.0/0.00	44.00	00.00	1			
LW033S	10/23/2003	14:35	29.89	dry			
LW033S	02/19/2004	15:23	29.89	13.89	16.00		
LW033S	06/09/2004	10:02	29.89	15.60	14.29		
LW033S	08/10/2004	11:44	29.89	16.69	13.20		
LW033S	11/18/2004	09:51	29.89				
F44 0000	11/10/2004	05.51	20.00	dry			
LUNGOAG	10/00/000=	44:04	00.00	10.00	40.04		
LW 034S	10/23/2003	14:24	30.93	16.99	13.94		
LW034S	02/19/2004	15:15	30.93	13.29	17.64	~~~	
LW 034S	06/09/2004	09:50	30.93	15.53	15.40		
LW034S	08/10/2004	11:39	30.93	16.61	14.32		
LW034S	11/18/2004	09:46	30.93	17.00	13.93		
LVV 0343	11/10/2004	03.40	30.33	17.00	10.00		
	// - /						
LW040S	11/18/2004	08:59	33.70	dry			
LW041S	11/18/2004	10:02	29.85	dry			
LW042S	11/18/2004	10:00	30,45	18.89	11.56		
2,,0,120	11/10/2001	10.00	00, 10	10.00	11.00		
LIMOAGO			20.66				
LW043S			30.66				
LW 043S	11/18/2004	09:49	30.66	18.44	12.22		
LW044S	11/18/2004	09:53	30.86	17.44	13.42		
LW101S	03/31/1997	09:54	29.41	4.51	24.90		
LW101S	07/16/1997	09:01	29.41	6.81	22.60		
LW101S	10/21/1997	18:01	29.41	7.28	22.13	****	
LW101S	01/27/1998	14:15	29.41	4.10	25.31	7777	
LW101S	05/18/1998	18:18	29.41	6.68	22.73		
LW101S	08/17/1998	11:21	29.41	8.14	21.27		
LW101S	11/13/1998	10:48	29.41	8.61	20.80		
LW101S	02/16/1999	14:11	29.41	3,21	26.20		
LW101S	05/18/1999	16:17	29.41	6.00	23.41		
LW101S	09/21/1999	12:54	29.41	8.60	20.81		
LW101S	12/06/1999	14:58	29.41	6.98	22.43		
LW101S	02/16/2000	09:44	29.41	4.96	24.45		
LW 101S	05/23/2000	18:06	29.41	6.83	22.58		
LW101S	08/29/2000	14:47	29.41	8.67	20.74		
LW101S	11/09/2000	13:56	29.41	9.39	20.02		
LW 101S	02/12/2001	15:02	29.41	8.02	21.39		
LW101S	06/04/2001	13:35	29.41	8.40	21.01	arm in the	
LW101S	08/16/2001	12:20	29.41	9.44	19.97		
LW101S	11/28/2001	13:12	29.41	8.58	20.83		
LW101S	02/27/2002	14:52	29.41	5.70	23.71		
LW101S	06/27/2002	15:32	29.41	7.80	21.61		
LW101S	08/26/2002	17:34	29.41	8.85	20.56		
LW101S	11/13/2002	09:35	29.41	9.92	19.49		
LW101S	02/11/2003	10:59	29.41	5.27	24.14		
LW101S	05/08/2003	08:43	29.41	5.40	24.01		
LW101S	08/27/2003	15:14	29.41	8.59	20.82		
LW 102S	03/31/1997	10:01	25.77	1.86	23.91		
	07/16/1997						
LW 102S		09:09	25.77	3.91	21.86		
LW102S	10/21/1997	17:59	25.77	4.03	21.74		
LW102S	01/27/1998	14:07	25.77	1.26	24.51		
LW 102S	05/18/1998	18:15	25.77	3.57	22.20		
LW 102S	08/17/1998	11:18	25.77	4.88	20.89		
LW102S	11/13/1998	10:45	25.77	5.14	20.63		

7/19/05 \\Edmdata\\proc\231\009\132\PhIII Ri 071905\PhIII Ri Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Landau Associates

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
LW102S	02/16/1999	14:08	25.77	0.45	25.32		
LW 102S	05/18/1999	16:12	25.77	3.24	22.53		
LW102S	09/21/1999	12:52	25.77	5.33	20.44		
LW102S	12/06/1999	14:56	25.77	3.67	22.10		
LW102S	02/16/2000	09:41	25.77	1.91	23,86		
LW102S	05/23/2000	18:03	25.77	3.72	22.05		
LW102S	08/29/2000 11/09/2000	14:45 13:53	25.77	5.40 5.94	20.37 19.83		
LW 102S LW 102S	02/12/2001	15:00	25.77 25.77	4.52	21,25		
LW 102S	06/04/2001	13:32	25.77	4.93	20.84		
LW 102S	08/16/2001	12:17	25.77	5.96	19.81		
LW102S	11/28/2001	13:10	25.77	5.15	20.62		
LW102S	02/27/2002	14:48	25.77	2.14	23.63		•
LW102S	06/27/2002	15:30	25.77	4.50	21.27		
LW 102S	08/26/2002	17:39	25.77	5.48	20.29		
LW102S	11/13/2002	09:32	25.77	6.50	19.27	<b>A 6</b> 10 10	
LW102S LW102S	02/11/2003 05/08/2003	10:55 08:40	25.77 25.77	1.88 2.22	23.89 23.55	****	
LW 102S	08/27/2003	15:17	25.77	5.24	20.53		
211 1020	00/21/2000	10.17	20.77	0.27	20.00		
LW103S	03/31/1997	09:50	29.07	5.50	23.57		
LW103S	07/16/1997	08:59	29.07	6.93	22.14		
LW 103S	10/21/1997	18:03	29.07	7.08	21.99		
LW 103S	01/27/1998	14:20	29.07	5.11	23.96		
LW103S LW103S	05/18/1998 08/17/1998	18:21 11:24	29.07 29.07	6.57 7.80	22.50 21.27		
LW 103S	11/13/1998	10:51	29.07	7.91	21.16		
LW 103S	02/16/1999	14:14	29.07	4.54	24.53		
LW103S	05/18/1999	16:20	29.07	6.20	22.87		
LW103S	09/21/1999	12:57	29.07	8.30	20.77		
LW 103S	12/06/1999	15:00	29.07	6.60	22.47		
LW103S	02/16/2000	09:46	29.07	5.50	23.57		
LW 103S	05/23/2000	18:10	29.07	6.64	22.43		
LW103S	08/29/2000	14:50	29.07	8.41	20.66		
LW103S LW103S	11/09/2000 02/12/2001	13:58 15:04	29.07 29.07	8.78 7.39	20.29 21.68		
LW 103S LW 103S	06/04/2001	13:37	29.07	7.83	21.24		
LW 103S	08/16/2001	12:23	29.07	9.07	20.00		
LW 103S	11/28/2001	13:16	29.07	8.02	21.05		
LW103S	02/27/2002	14:50	29.07	5.26	23.81		
LW103S	06/27/2002	15:34	29.07	7.42	21.65		
LW103S	08/26/2002	17:36	29.07	8.57	20.50		
LW 103S	11/13/2002	09:37	29.07	9.48	19.59		
LW103S	02/11/2003	11:03	29.07	5.65	23.42		
LW103S LW103S	05/08/2003 08/27/2003	08:46 15:15	29.07 29.07	5.86 8.33	23.21 20.74	****	
LW 1033	06/2//2003	15.15	29.07	0.33	20.74		
LW104S	03/31/1997	10:06	26.57	3,55	23.02		
LW104S	07/16/1997	08:54	26.57	5.71	20.86		
LW104S	10/21/1997	16:22	26.57	5.71	20.86		
LW104S	01/27/1998	14:00	26.57	2.84	23.73		
LW 104S	05/18/1998	18:11	26.57	5.17	21.40		
LW104S LW104S	08/17/1998 11/13/1998	11:15 10:41	26.57 26.57	6.64 6.72	19.93 19.85		
LW 104S	02/16/1999	14:03	26.57	2.11	24.46		
LW 1043 LW 104S	05/18/1999	16:08	26.57	4.97	21.60		
LW104S	09/21/1999	12:48	26.57	7.18	19.39		
LW104S	12/06/1999	14:54	26.57	5.00	21.57		
LW104S	02/16/2000	09:39	26.57	3.61	22.96		
LW 104S	05/23/2000	17:59	26.57	5.61	20.96		
LW104S	08/29/2000	14:43	26.57	7.08	19.49		
LW104S	11/09/2000	13:51	26.57	7.49	19.08	****	
LW104S	02/12/2001 06/04/2001	14:57	26.57 26.57	6.28 6.64	20.29 19.93		
LW104S LW104S	08/16/2001	13:30 12:15	26.57 26.57	7.56	19.93		
LW104S	11/28/2001	13:06	26.57	6.30	20.27		
LW104S	02/27/2002	14:46	26.57	4.07	22.50		
LW 104S	06/27/2002	15:27	26.57	6.28	20.29		
LW104S	08/26/2002	17:41	26.57	7.13	19.44		
LW104S	11/13/2002	09:30	26.57	7.85	18.72		
LW104S	02/11/2003	10:51	26.57	3.72	22.85		
LW104S	05/08/2003	08:38	26.57	4.94	21.63		
LW104S	08/27/2003	15:19	26.57	6.87	19.70	****	
RW1	05/18/1999	15:06	31.46	15.70	15.76		

7/19/05 \\Edmdata\wproc\231\009\132\PhiII RI 071905\PhiII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvl/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
RW1	09/21/1999	11:46	31.46	18,02	13.44		
RW1	12/06/1999	14:43	31.46	17.73	13.73		
RW1	02/16/2000	10:33	31,46	16.14	15.32	***	
RW1	05/23/2000	17:46	31.46	17.09	14.37		
RW1 RW1	08/29/2000 11/09/2000	14:28 12:57	31.46 31.46	18.29 18.67	13.17 12.79		
RW1	02/12/2001	16:44	31.46	18.30	13.16		
RW1	06/04/2001	13:17	31,46	18.22	13.24		
RW1	08/16/2001	10:55	31.46		31.46		Vapor/water recovery system test running - not measured
RW1	11/28/2001	12:02	31.46	18.55	12.91		
RW1	02/27/2002	14:03	31.46	16.12	15.34		
RW1	03/05/2002	11:38	31.46	16.33	15.13		
RW1 RW1	04/05/2002 05/29/2002	08:27 00:00	31.46 31.46	16.28 17.00	15.18 14.46		
RW1	06/27/2002	15:16	31.46	17.33	14.13		
RW1	08/26/2002	16:40	31.46	18.00	13.46		
RW1	11/13/2002	08:26	31.46	18.85	12.61		
RW1	02/11/2003	09:34	31.46	16.50	14.96		
RW1	05/08/2003	07:46	31.46	16.23	15.23		
RW1	08/27/2003	14:04	31.46	18.09	13.37		
RW1	10/23/2003	13:23	31.46	18.55	12.91		
RW1	02/19/2004	13:52	31.46 31.46	16.31	15.15		
RW1 RW1	06/09/2004 08/10/2004	08:35 12:03	31,46 31,46	17.60 18.22	13,86 13,24		
RW1	11/18/2004	09:21	31.46	18.61	12.85		
			,				
RW3	12/06/1999	15:24	29.96	14.20	15.76	***	
RW3	02/16/2000	10:37	29.96	11.88	18.08		
RW3	05/23/2000	17:26	29.96	13.02	16.94	****	
RW3	08/29/2000	13:42	29.96	14.88	15.08		
RW3 RW3	11/09/2000 02/12/2001	13:03 15:28	29.96 29.96	15.58 15.13	14.38 14.83		
RW3	06/04/2001	12:30	29.96	15.09	14.87		
RW3	08/16/2001	11:44	29.96	15.74	14.22		
RW3	11/28/2001	12:40	29.96	15,52	14.44		
RW3	02/27/2002	14:26	29.96	11.80	18.16		
RW3	03/05/2002	11:02	29.96	11.94	18.02		
RW3	04/05/2002	08:44	29.96	12.06	17.90		
RW3	05/29/2002	00:00	29.96	13.00	16.96		
RW3 RW3	06/27/2002	14:59	29.96	13.64	16.32	****	Abandoned August 2003
							, isaliasilisa , tagast 2000
PZ1	05/23/2000	17:47	28.04	14.21	13.83		
PZ1	08/29/2000	14:30	28.04	15.33	12.71		
PZ1 PZ1	11/09/2000 02/12/2001	12:55 16:42	28.04 28.04	15.68 15.30	12.36 12.74		
PZ1	06/04/2001	13:20	28.04	15.29	12.74		
PZ1	08/16/2001	11:17	28.04	15.94	12.10		
PZ1	11/28/2001	12:09	28.04	15.48	12.56		
PZ1	02/27/2002	14:02	28.04	13.28	14.76		
PZ1	03/05/2002	11:34	28.04	13.40	14.64		
PZ1	04/05/2002	08:32	28.04	13.44	14.60		
PZ1	05/29/2002	00:00	28.04	14.16	13.88		
PZ1 PZ1	06/27/2002 08/26/2002	15:17 16:33	28.04 28.04	14.50 15.17	13.54 12.87		·
PZ1	11/13/2002	08:42		15.17	12.21		
PZ1	02/11/2003	09:36		13.58	14.46		
PZ1	05/08/2003	07:58		13.25	14.79		
PZ1	08/27/2003	14:20		15.32	12.72		
PZ1	10/23/2003	13:19		15.75	12.29		
PZ1	02/19/2004	13:56		13.41	14.63		
PZ1	06/09/2004	08:37		14.75	13.29		
PZ1 PZ1	08/10/2004 11/18/2004	12:00 09:22		15.42 15.46	12,62 12.58		
1 41	11/10/2004	00.22	20.04	, J. 70	12.00	727	
PZ2	06/27/2002	15:18	31.97	18,31	13.66		
PZ2	08/26/2002	16:34		18,88	13.09		
PZ2	11/13/2002	08:25		19.40	12.57		
PZ2	02/11/2003	09:44		17.46	14.51	****	
PZ2	05/08/2003	07:45		17.15	14.82		
PZ2 PZ2	08/27/2003 10/23/2003	14:03 13:21		19.02 19.27	12.95 12.75	0.06	
PZ2	02/19/2004	13:50		17.36	14.61	0,00	
PZ2	06/09/2004	08:33		18.51	13.46		
PZ2	08/10/2004	12:02		19.12	12.85	****	

7/19/05 \\Edmdata\\proc\231\009\132\PhIII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Landau Associates

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
PZ2	11/18/2004	09:20	31,97	19.24	12.73		
PZ3	06/27/2002	15:19	31.12	19.35	11,77		
PZ3	08/26/2002	16:35	31.12	19.74	11,38		
PZ3	11/13/2002	08:45	31.12	16.87	*****		
PZ3	02/11/2003	09:40	31.12	19.05	12.07	****	
PZ3	05/08/2003	07:53	31.12	18.95	12.17	*****	
PZ3 PZ3	08/27/2003 10/23/2003	14:26 12:39	31.12 31.12	19.82 dry	11.30		
PZ3	02/19/2004	15:09	31.12	19.07	12.05		
PZ3	06/09/2004	08:39	31.12	19.53	11.59	~~~	
PZ3	08/10/2004	12:04	31.12	19.86	11.26		
PZ3	11/18/2004	09:19	31.12	dry		****	
PZ4	06/27/2002	15:20	28.47	dry			
PZ4	08/26/2002	16:36	28.47	dry			
PZ4	11/13/2002	08:48	28.47	16.87	11.60		
PZ4	02/11/2003	09:41	28.47	dry	10.60		
PZ4 PZ4	05/08/2003 08/27/2003	07:52 14:27	28.47 28.47	17.78 dry	10.69		
PZ4	10/23/2003	12:36	28.47	dry			
PZ4	02/19/2004	15:08	28.47	dry			
PZ4	06/09/2004	08:41	28.47	dry		****	
PZ4	08/10/2004	12:03	28.47	dry			
PZ4	11/18/2004	09:18	28.47	dry	****		
OX001S	06/27/2002	15:13	33.38	17.85	15.53		
OX001S	08/26/2002	16:45	33.38	18.75	14.63		
OX001S	11/13/2002	08:30	33.38	19.92	13.46		
OX001S	02/11/2003 05/08/2003	09:59	33.38 33.38	16.96 16.48	16.42 16.90		
OX001S OX001S	08/27/2003	08:04 14:38	33.38	18.76	14.62		
OX001S	10/23/2003	14:09	33.38	19.51	13.87		
OX001S	02/19/2004	14:10	33.38	16.64	16.74		
OX001S	06/09/2004	08:45	33.38	18.16	15.22		
OX001S	08/10/2004	12:07	33,38	19.08	14.30		
OX001S	11/18/2004	09:07	33.38	19.63	13.77	0.03	
OX002S	06/27/2002	15:12	28,69	13.22	15.47		
OX002S	08/26/2002	16:44	28,69	14.26	14.43		
OX002S	11/13/2002	08:33	28.81	15.39	13.42		New reference elevation September 2002
OX002S	02/11/2003	10:06	28.81	12.39	16.42		
OX002S OX002S	05/08/2003 08/27/2003	08:09 14:33	28.81 28.81	11.90 14.55	16,91 14,26		
OX002S	10/23/2003	14:14	28.81	15.22	13.84	0.31	
OX002S	02/19/2004	14:07	28.81	12.06	16.75		
OX002S	06/09/2004	08:52	28.95	13.61	15.34		New reference elevation July 2004
OX002S	08/10/2004	12:09	28.95	14.53	14.42		·
OX002S	11/18/2004	09:10	28.95	15.18	13.87	0.13	
OX003S	06/27/2002	15:14	30.01	14.65	15.36		
OX003S	08/26/2002	16:42	30.01	15.50	14.51		
OX003S	11/13/2002	08:31	30.01	16.65	13.36		
OX003S	02/11/2003	09:58	30.01	13.78	16.23		
OX003S OX003S	05/08/2003 08/27/2003	08:03 14:40	30.01 30.01	13.30 15.52	16.71 14.49		
OX003S	10/23/2003	14:40	30.01	16.22	13.79		
OX003S	02/19/2004	14:10	30.01	13.47	16.54		
OX003S	06/09/2004	08:51	30.01	14.96	15.05		
OX003S	08/10/2004	12:06	30.01	15.81	14.20		
OX003S	11/18/2004	09:13	30.01	16.61	13.66	0.33	
OX004S	06/27/2002	15:15	33.42	19.07	14.35		
OX004S	08/26/2002	16:39	33.42	19.74	13,68		
OX004S	11/13/2002	08:24	33.54	20.73	12.81		New reference elevation September 2002
OX004S	02/11/2003	09:38	33.54	18.39	15.15		
OX004S	05/08/2003	07:47	33.54	19.07	14.47		
OX004S OX004S	08/27/2003 10/23/2003	14:07 12:43	33.54 33.54	19.95 dry	13.59		
OX004S	02/19/2004	13:54	33.54	18.21	15,33		
OX004S	06/09/2004	08:38	33.51	19.44	14.07		New reference elevation July 2004
OX004S	08/10/2004	12:06	33.51	20.12	13.39		
OX004S	11/18/2004	09:17	33.51	dry			
OX005S	10/23/2003	13:44	30.74	16.15	14.59		

7/19/05 \\Edmdata\\proc\231\009\132\\PhiII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Landau Associates

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
							NOTEO
OX005S	02/19/2004	14:25	30.74	12.46	18.28		
OX005S OX005S	06/09/2004 08/10/2004	09:14 12:18	30.74 30.74	14.35 15.65	16.39 15.09		
OX005S	11/18/2004	08:58	30.74	16.26	14.48		
0/(0000	11/10/2004	00.00	30.74	10.20	14.40		
OX006S	10/23/2003	13:45	30.92	16.43	14.49		
OX006S	02/19/2004	14:24	30.92	12.85	18.07		
OX006S	06/09/2004	09:12	31.03	14.71	16.32		New reference elevation July 2004
OX006S	08/10/2004	12:17	31.03	16.09	14.94		•
OX006S	11/18/2004	09:00	31.03	16.66	14.37		
OX007S	10/23/2003	13:46	30,68	16.25	14.43		
OX007S	02/19/2004	14:23	30,68	12.67	18.01		
OX007S	06/09/2004	09:11	30.68	14.55	16.13		
OX007S	08/10/2004	12:16	30.68	15.79	14.89		
OX007S	11/18/2004	09:02	30.68	16.34	14.34	2022	
0\/0000	10/00/0000	40.47	00.74	10.44	14.00		
OX008S	10/23/2003	13:47	30.74	16.41	14.33		
OX008S OX008S	02/19/2004 06/09/2004	14:19 09:09	30.74 30.74	12.96 14.81	17.78 15.93	2022	
OX008S	08/10/2004	12:15	30.74	15.96	14.78		
OX008S	11/18/2004	08:23	30.74	16.52	14.22		
07.0000	11/10/2004	00,20	00.74	10.02	17.22		
OX009S	08/10/2004	12:12	31.14	16.92	14.22		Reference elevation July 2004
Deep Wells:							
B2	08/11/1993	10:02	30.31	25,44	4.87		Slight sheen, slight to mod solvent-like odor
B2	10/26/1993	13:32	30.31	25,25	5.06		
B2	11/17/1993	13:32	30.31	25.23	5.08		
B2	12/17/1993	12:59	30.31	23.88	6.43		
B2	01/17/1994	13:12	30.31	23.99	6.32		
B2	02/18/1994 03/18/1994	14:20	30.31	23.73 23.15	6.58 7.16	***	
B2 B2	04/18/1994	12:59 14:42	30.31 30.31	24.35	5,96		
B2	05/18/1994	15:22	30.31	23.12	7.19		
B2	06/17/1994	14:54	30.31	22.90	7.41		
B2	07/19/1994	09:20	30.31	24.38	5.93		
B2	08/17/1994	07:35	30,31	25.22	5.09		
B2	09/16/1994	07:27	30,31	25.89	4.42		
B2	10/17/1994	09:03	30.31	25.43	4.88		
B2	11/21/1994	11:51	30.31	24.56	5.75		
B2	12/19/1994	11:10	30.31	21.82	8.49		
B2	01/18/1995	11:18	30,31	18.93	11.38		
B2	02/21/1995	13:23	30.31	17.12	13.19		
B2	03/21/1995	13:05	30.31	20.37	9.94		
B2	04/19/1995	12:48	30.31	21.21	9.10		
B2	05/19/1995	13:38	30.31	19.30	11.01		
B2	07/17/1995	13:55	30.31	22.72	7.59		
B2	08/22/1995	07:53	30.31	24.42	5.89		
B2 B2	09/22/1995 11/20/1995	08:28 07:57	30.31 30.31	25.28 22.02	5,03 8.29		
B2	12/01/1995	08:29	30.31	13.63	16.68		
B2	12/19/1995	07:26	30,31	15,57	14.74		
B2	01/19/1996	08:38	30.31	16.48	13.83		
B2	02/20/1996	10:42	30.31	10.63	19.68		
B2	03/19/1996	09:23	30,31	16.61	13.70		
B2	04/19/1996	11:53	30.31	16.20	14.11		
B2	07/22/1996	14:24	30.31	22.29	8.02		
B2	08/20/1996	14:20	30.31	23.43	6.88		
B2	09/24/1996	08:11	30.31	24.30	6,01		
B2	10/28/1996	11:09	30.31	23.76	6.55		
B2	12/13/1996	10:47	30.31	16.70	13.61		
B2	03/25/1997	12:02	30.31	15.85	14.46		
B2	03/31/1997	09:27	30.31	14.91	15.40		
B2	07/16/1997	07:45	30.31	19.91	10.40		
B2	10/21/1997	16:30	30.31	23.56	6.75		
B2	01/27/1998	12:06	30.31	19.32	10.99		
B2 B2	05/18/1998 08/17/1998	17:54 10:23	30,31 30,31	18.80 24.38	11.51 5.93		
B2	11/13/1998	10:23	30.31	25.33	4.98		
B2	02/16/1999	13:34	30.31	19.64	10.67		
B2	05/18/1999	15:50	30.31	19.04	11.27		
B2	09/21/1999	12:18	30.31	25.34	4.97		
B2	12/06/1999	14:39	30.31	20.25	10.06		
B2	02/16/2000	10:56	30.31	20.57	9.74		

 $7/19/05\ \Edmdata\\proc\231\009\132\PhiII\ RI\ 071905\PhiII\ RI\ Rpt_Tb\ B-1\ Quarterly\ Event\ Source;\ S:/Sheets/TimeOil/WaterLvt/GWL\ All$ 

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
B2	05/23/2000	17:33	30,31	20.99	9.32		
B2	08/29/2000	14:20	30.31	25,38	4.93		
B2	11/09/2000	13:29	30.31	25.31	5.00		
B2	02/12/2001	15:27	30.31	24.62	5,69	****	
B2	06/04/2001	13:04	30.31	24.84	5.47		
B2	08/16/2001	11:58	30.31	26.75	3.56		
B2	11/28/2001	12:46	30.31	24.14	6.17	***	
B2	02/27/2002	14:35	30.31	22.90	7.41		
B2	06/27/2002	15:07	30.31	20.16	10.15		
B2	08/26/2002	17:01	30.31	25.32	4.99		
B2	11/13/2002	09:03	30.31	25.28	5.03		
B2	02/11/2003	10:14	30.31	23.58	6.73		
B2 B2	05/08/2003 08/27/2003	08:13	30.31	21.33	8.98	****	
B2	10/23/2003	15:32 14:08	30.31 30.31	24.25 25.85	6.06 4.46	10 P T T	
B2	02/19/2004	14:12	30.31	22.21	8.10		
B2	06/09/2004	09:02	30.31	21.45	8.86		
B2	08/10/2004	08:50	30.31	25.73	4.58		
B2	08/10/2004	10:29	30.31	25.96	4.35		
B2	11/18/2004	08:13	30.31	25.08	5.23		
G1A	03/25/1997	11:55	29.72	14.84	14.88		
G1A	03/31/1997	09:11	29.72	14.28	15.44		
G1A	07/16/1997	07:33	29.72	18.94	10.78		
G1A	10/21/1997	16:18	29.72	22.44	7.28		
G1A	01/27/1998	11:46	29.72	18.42	11.30		
G1A	05/18/1998	17:31	29.72	18.05	11.67	2200	
G1A	08/17/1998 11/13/1998	10:07	29.72	23.35	6.37		
G1A G1A	02/16/1999	09:54 13:14	29.72 29.72	24.59	5.13 11.44		
G1A	05/18/1999	14:51	29.72	18.28 18.42	11.30		
G1A	09/21/1999	11:29	29.72	24.32	5.40		
G1A	12/06/1999	14:05	29.72	19.82	9.90		
G1A	02/16/2000	10:18	29.72	19.81	9.91		
G1A	05/23/2000	16:31	29.72	20.08	9.64		Replaced lock and tubing
G1A	08/29/2000	13:13	29.72	24.36	5,36		,
G1A	11/09/2000	12;32	29.72	24.85	4.87		
G1A	02/12/2001	16:01	29.72	24.08	5.64		
G1A	06/04/2001	11:40	29.72	24.10	5.62		
G1A	08/16/2001	10:52	29.72	25.51	4.21	****	
G1A	11/28/2001	11:32	29.72	23.84	5.88	***	
G1A	02/27/2002	13:39	29.72	21.96	7.76		
G1A	06/27/2002	14:17	29.72	19.48	10.24		
G1A G1A	08/26/2002 11/13/2002	16:06	29.72	24.36	5.36		
G1A	02/11/2003	07:35 08:59	29.72 29.72	24.60 22.32	5.12 7.40		
G1A	05/08/2003	06:58	29.72	20.51	9.21		
G1A	08/27/2003	13:36	29.72	24.16	5.56		
G1A	10/23/2003	12:37	29.72	25.20	4.52		
G1A	02/19/2004	12:57	29.72	21.51	8.21		
G1A	06/09/2004	07:55	29.72	20.91	8.81		
G1A	08/10/2004	08:46	29.72	25.07	4.65		
G1A	08/10/2004	10:25	29.72	25.24	4.48		
G1A	11/18/2004	08:09	29.72	24.56	5.16		
10	00/05/4007	40.40	00.05	45.00	44.40		
J2	03/25/1997	12:18	29,65	15.22	14.43	****	
J2	03/31/1997	11:21	29.65	14.38	15.27		
J2	07/16/1997 10/21/1997	08:24	29.65	19.28	10.37	M W W	
J2 J2	01/27/1998	17:00 13:19	29,65 29,65	23.02 18.69	6.63 10.96		
J2	05/18/1998	18:00	29.65	18.14	11.51		
J2	08/17/1998	10:21	29.65	23.70	5.95		
J2	11/13/1998	10:28	29.65	24.64	5.01		
J2	02/16/1999	13:40	29.65	19.00	10.65		
J2	05/18/1999	15:46	29,65	18.40	11.25		
J2	09/21/1999	12:30	29.65	24.73	4.92		
J2	12/06/1999	15:08	29.65	19.53	10.12		
J2	02/16/2000	11:07	29.65	19.89	9.76		
J2	05/23/2000	17:28	29.65	20,33	9.32		
J2	08/29/2000	14:15	29.65	24.67	4.98		
J2	11/09/2000	13:26	29.65	24.66	4.99		
J2	02/12/2001	15:23	29.65	23.92	5.73		
J2	06/04/2001	13:02	29.65	24.17	5.48		
J2	08/16/2001	11:51	29.65	25.57	4.08		
J2	11/28/2001	12:36	29.65	23.45	6.20		

7/19/05 \\Edmdata\\proc\231\009\132\\PhIII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvi/GWL All

			Reference	DTW	GW Elevation	LNAPL	
Well	Date	Time	Elevation (ft) (a)		(ft) (c)	Thickness (ft)	NOTES
J2	02/27/2002	14:31	29.65	22.21	7.44		
J2	06/27/2002	15:03	29.65	19.48	10.17		
J2 J2	08/26/2002 11/13/2002	16:56 08:59	29.65 29.65	24.67 24.60	4.98 5.05		
J2	02/11/2003	10:19	29.65	22.95	6.70	****	
J2	05/08/2003	08:16	29.65	20.65	9.00	****	
J2	08/27/2003	14:48	29.65	24.12	5.53		
J2 J2	10/23/2003 02/19/2004	13:54 14:17	29.65 29.65	25.18 21.52	4.47 8.13	****	
J2	06/09/2004	09:07	29.65	20.76	8.89	~~~	
J2	08/10/2004	08:40	29.65	25.00	4.65		
J2	08/10/2004	10:27	29.65	25.24	4.41	***	
J2	11/18/2004	08:20	29.65	24.39	5.26		
J3	03/25/1997	12:20	29.58	14.70	14.88		
J3	03/31/1997	11:25	29.58	14.03	15.55		
J3 J3	07/16/1997 10/21/1997	08:25 17:02	29.58 29.58	18.91 22.37	10.67 7.21		
J3	01/27/1998	13:21	29.58	18.28	11.30		
J3	05/18/1998	17:58	29.58	17.84	11.74		
J3	08/17/1998	10:22	29.58	23.12	6.46	2200	
J3	11/13/1998	10:26	29.58	24.14	5.44	armana .	
J3 J3	02/16/1999 05/18/1999	13:41 15:48	29.58 29.58	18.32 18.01	11.26 11.57	****	
J3	09/21/1999	12:31	29.58	24.12	5.46		
13	12/06/1999	15:09	29.58	19.31	10.27		
J3	02/16/2000	10:07	29.58	19.50	10.08		
J3	05/23/2000 08/29/2000	17:29	29.58	19.86 24.05	9.72 5.53	2007	
J3 J3	11/09/2000	14:17 13:27	29.58 29.58	24.03	5.34	222	
J3	02/12/2001	15:24	29.58	23.45	6.13		
J3	06/04/2001	12:44	29.58	23,62	5.96		
J3	08/16/2001	11:50	29.58	24.98	4.60		
J3 J3	11/28/2001 02/27/2002	12:37 14:32	29.58 29.58	22.98 21.52	6.60 8.06		
J3	06/27/2002	15:04	29.58	19.14	10.44		
J3	08/26/2002	16:57	29.58	23.99	5.59		
13	11/13/2002	08:58	29.58	24.10	5.48		
J3	02/11/2003	10:20	29.58	22.28 20.16	7.30 9.42	222	
J3	05/08/2003 08/27/2003	08:17 14:49	29,58 29,58	23.60	5.98		
J3	10/23/2003	13:56	29.58	24.70	4.88		
J3	02/19/2004	14:16	29.58	21.18	8.40		
J3	06/09/2004	09:06	29.58	20.40	9.18		
J3	08/10/2004 08/10/2004	08:41 10:28	29.58 29.58	24.50 24.67	5.08 4.91		
J3	11/18/2004	08:17	29.58	23.86	5.72		
0	02/05/1007	11:40	20.02	17.01	15.02		
0	03/25/1997 03/31/1997	11:40 08:48	32.03 32.03	17.01 16.39	15.64		
ŏ	07/16/1997	07:05	32.03	21.93	10.10		
0	10/21/1997	16:01	32.03	22.23	9.80	****	
0	01/27/1998	11:03	32.03	20.51	11.52		
0	05/18/1998 08/17/1998	17:14 10:13	32.03 32.03	20.25 25.42	11.78 6.61		
0	11/13/1998	09:31	32.03	26.49	5.54		
0	02/16/1999	12:45	32.03	20.25	11.78		
0	05/18/1999	14:36	32.03	21.23	10.80		
0	09/21/1999 12/06/1999	11:09 13:48	32.03 32.03	26.22 21.90	5.81 10.13		
0	02/16/2000	10:04	32.03	22.21	9.82		
Ö	05/23/2000	16:15	32.03	22.18	9.85		
0	08/29/2000	12:56	32.03	26.49	5.54		
0	11/09/2000 02/12/2001	12:18	32.03 32.03	27.01 26.12	5.02 5.91		
0	06/04/2001	15:52 11:22	32.03	26.12	5.95		
Ö	08/16/2001	10:22	32.03	27.58	4.45		
0	11/28/2001	11:18	32.03	26.15	5,88	227	
0	02/27/2002	13:15	32.03	24.08	7.95 10.74		
0	06/27/2002 08/26/2002	14:09 15:47	32.03 32.03	21.29 25.91	10.74 6.12		
0	11/13/2002	07:21	32.03	26.56	5.47		
0	02/11/2003	08:38	32.03	22.81	9.22		
0	05/08/2003	06:44	32.03	22.70	9.33		
0	08/27/2003	13:23	32.03	26.43	5.60	****	

7/19/05 \\Edmdata\\proc\231\009\132\\PhiII RI 071905\\PhiII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvt/GWL All

Landau Associates

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
0	10/23/2003	12:02	32.03	27.11	4.92		
0	02/19/2004	12:15	32.03	23.71	8.32		
0	06/09/2004	07:32	32.03	22.76	9.27		
0	08/10/2004	08:23	32.03	26.51	5.52		
0	08/10/2004	10:02	32.03	26.52	5.51		
O	11/18/2004	07;33	32,03	26.13	5.90		
R	03/25/1997	11:36	30.47	15.56	14.91		
R	03/31/1997	08:43	30.47	14.85	15.62		
R	07/16/1997	07:00	30,47	20.37	10.10		
R R	10/21/1997	15:56	30,47	22.54	7,93		
R	01/27/1998 05/18/1998	10:57 17:15	30,47 30,47	18.98 18.73	11.49 11.74		
R	08/17/1998	10:12	30.47	23.93	6.54		
R	11/13/1998	09:35	30.47	25.17	5.30		
R	02/16/1999	13:05	30.47	18.79	11.68		
R	05/18/1999	14:37	30.47	19.64	10.83		
R	09/21/1999	11:15	30.47	24.53	5.94	****	
R	12/06/1999	13:46	30.47	20.33	10.14		
R	02/16/2000	10:12	30.47	20.65	9.82		
R	05/23/2000	16:17	30.47	20.64	9.83		
R	08/29/2000	12:58	30.47	24.97	5,50		
R R	11/09/2000 02/12/2001	12:20 15:54	30.47 30.47	25.47 24.46	5.00 6.01		
R	06/04/2001	11:36	30.47	24.53	5.94		
R	08/16/2001	10:35	30.47	26.02	4,45		
R	11/28/2001	11:19	30.47	24.57	5.90		
R	02/27/2002	13:17	30.47	22.50	7.97		
R	06/27/2002	14:08	30.47	19.75	10.72		
R	08/26/2002	15:58	30.47	24.38	6.09		
R	11/13/2002	07:22	30.47	25.04	5.43	****	
R	02/11/2003	08:41	30.47	21.22	9.25	~~~	
R	05/08/2003	06:46	30.47	21.14	9.33		
R	08/27/2003	13:25	30.47	24.91	5.56		
R	10/23/2003	11:56	30.47	25.60	4.87		
R	02/19/2004	12:05	30.47	22.15	8.32		
R R	06/09/2004 08/10/2004	07:30 08:21	30.47 30.47	21.21 24.99	9.26 5.48		
R	08/10/2004	10:00	30.47	24.99	5.48		
R	11/18/2004	07:34	30.47	24.61	5.86		
LW001D	03/31/1997	11:11	28.31	12.71	15.60		
LW001D	07/16/1997	08:12	28.31	17.65	10.66		
LW001D	10/21/1997	16:55	28.31	21.29	7.02		
LW001D	01/27/1998	13:07	28.31	17.06	11.25		
LW001D	05/18/1998	17:39	28.31	16.53	11.78		
LW001D	08/17/1998	10:30	28.31	21.82	6.49		
LW001D	11/13/1998	10:01	28.31	22.77	5.54		
LW001D	02/16/1999	13:21	28.31	17.30	11.01		
LW001D	05/18/1999	15:36	28.31	16.76	11.55		
LW001D	09/21/1999	12:12	28.31	22.91	5.40		
LW001D LW001D	12/06/1999 02/16/2000	14:34 10:49	28.31 28.31	18.00 18.16	10.31 10.15	7017	
LW001D	05/23/2000	17:19	28.31	18.62	9.69		
LW001D	08/29/2000	13:59	28.31	22.81	5.50		
LW001D	11/09/2000	13:20	28.31	22.98	5.33		
LW001D	02/12/2001	15:35	28.31	22.23	6,08		
LW001D	06/04/2001	12:23	28.31	22.36	5,95		
LW001D	08/16/2001	11:38	28.31	23.73	4.58		
LW001D	11/28/2001	12:29	28.31	21.73	6.58		
LW001D	02/27/2002	14:17	28.31	20.31	8.00	****	
LW001D	06/27/2002	14:49	28.31	17.81	10.50		
LW001D	08/26/2002	17:12	28.31	22.85	5.46		
LW001D	11/13/2002	09:08	28.31	22.91	5.40		
LW001D	02/11/2003	10:27	28.31	21.11	7.20		
LW001D LW001D	05/08/2003 08/27/2003	08:19 14:50	28.31 28.31	18.91 22.40	9.40 5.91		
LW001D	10/23/2003	13:57	28.31	23.51	5.91 4.80		
LW001D	02/19/2004	14:30	28.31	19.91	8.40		
LW001D	06/09/2004	09:21	28.31	19.13	9.18		
LW001D	08/10/2004	08:45	28.31	23.30	5.01		
LW001D	08/10/2004	10:27	28.31	23.50	4.81		
LW001D	11/18/2004	08:27	28.31	22.69	5.62		
LW003D	03/31/1997	11:45	30.80	19.38	11.42		Time estimated

7/19/05  $\B \B B-1 \B$ 

Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
LW003D	07/16/1997	08:38	30.80	28.09	2.71		
LW003D	10/21/1997	17:07	30.80	23.36	7.44		
LW 003D	01/27/1998	13:30	30.80	21.66	9.14		
LW003D	05/18/1998	17:35	30,80	19.21	11.59		
LW003D	08/17/1998	10:24	30.80	24.62	6.18		
LW 003D	11/13/1998	09:03	30.80	25.56	5.24		
LW003D	02/16/1999	13:44	30,80	20.00	10.80		December 1 to 1 44 DD
LW003D	05/18/1999	15:58	30,80	19.42	11.38		Purged dry at 11:00
LW003D	09/21/1999	10:40	30.80	25.76	5.04		
LW003D LW003D	12/06/1999 02/16/2000	14:45 09:54	30,80 30,80	20.69	10.11		
LW003D	05/23/2000	14:40	30.80	20.98 21.16	9.82 9.64		Purged dry at 13:10
LW003D	08/29/2000	14:36	30.80	21.10	3.04		Well purged dry 8/28; sampled a.m. on 8/29
LW003D	11/09/2000	14.00	30.80				Well sampled 11/8/00 - water level not representative
LW003D	02/12/2001	15:11	30.80	24.85	5.95		
LW003D	06/04/2001	12:35	30.80	25.09	5.71		
LW003D	08/16/2001	11:47	30.80	26.43	4.37		
LW003D	11/28/2001	12:42	30.80	24.48	6.32		
LW003D	02/27/2002	14:20	30.80	23.13	7.67		
LW 003D	06/27/2002	14:59	30,80	20.55	10.25		
LW003D	08/26/2002	17:03	30.80	25.63	5.17		
LW003D	11/13/2002	09:20	30.80	25.57	5.23		
LW003D	02/11/2003	10:40	30.80	24.03	6.77	****	
LW003D	05/08/2003	08:29	30.80	21.68	9.12		
LW003D	08/27/2003	15:04	30.80	25.10	5.70		
LW003D	10/23/2003	13:49	30.80	26.18	4.62		
LW003D	02/19/2004	14:21	30.80	22.65	8.15	****	
LW003D	06/09/2004 08/10/2004	09:29 08:39	30,80 30,80	21.82 25.95	8,98 4,85	****	
LW003D LW003D	08/10/2004	10:25	30.80	26.10	4.70	****	
LW003D	11/18/2004	08:24	30.80	25.42	5.38	****	
LVVOOOD	11/10/2004	00.24	00.00	20.72	0.00		
LW004D	03/31/1997	09:18	30.17	14.73	15.44		
LW004D	07/16/1997	07:42	30.17	19.43	10.74		
LW004D	10/21/1997	16:27	30.17	23.02	7.15		
LW004D	01/27/1998	11:56	30.17	18.84	11.33		
LW004D	05/18/1998	17:33	30.17	18.54	11.63		
LW004D	08/17/1998	10:18	30.17	23.81	6.36		
LW004D	11/13/1998	09:57	30.17	24.99	5.18		
LW004D	02/16/1999	13:17	30.17	18.79	11.38		
LW004D	05/18/1999	15:04	30.17	18.77	11.40		Completed sampling at 13:40
LW004D	09/21/1999	11:41	30.17	24.78	5.39		
LW004D	12/06/1999	14:18	30.17	20.21	9.96		
LW004D LW004D	02/16/2000 05/23/2000	10:30 16:54	30.17	20.23 20.55	9.94 9.62		
LW 004D	08/29/2000	13:38	30.17 30.17	24.78	5.39		
LW004D	11/09/2000	12:52	30.17	25.19	4.98		
LW004D	02/12/2001	16:39	30.17	24.71	5.46		
LW 004D	06/04/2001	12:07	30.17	24.66	5.51		
LW004D	08/16/2001	11:15	30.17	26.27	3.90		
LW004D	11/28/2001	12:04	30.17	24.41	5.76		
LW004D	02/27/2002	14:00	30.17	22.65	7.52		
LW004D	03/05/2002	11:36	30.17	22.94	7.23		
LW004D	04/05/2002	08:19	30.17	23.75	6.42		
LW004D	05/29/2002	00:00	30.17	20.48	9.69		
LW004D	06/27/2002	14:41	30.17	20.15	10.02		
LW004D	08/26/2002	16:32	30.17	25.02	5.15		
LW004D	11/13/2002	08:23	30.17	25.26	4.91		
LW004D	02/11/2003	09:32	30.17	23.08	7.09		
LW004D	05/08/2003	07:44	30.17	21.21	8.96		
LW004D	08/27/2003	14:01	30.17	24.78	5.39		
LW004D	10/23/2003	13:16	30.17	25.85	4.32		
LW004D	02/19/2004	13:45	30.17	22.14	8.03		
LW004D	06/09/2004	08:32	30.17	21.60	8.57		
LW004D LW004D	08/10/2004 08/10/2004	08:24 10:09	30.17 30.17	25.68 25.87	4.49 4.30		
LW004DR	11/24/2004	11:00	30.17	26.23	3.88		Replacement well installed 11/19/04
	03/25/1997						торгасовнети мен петанел 11/19/04
LW006D	03/25/1997	11:52 09:05	30.84 30.84	16.51 15.53	14.33 15.31		Faint odor
FM009D	07/16/1997	09.05		20.74	10.10		I GITS GOOT
FM000D	10/21/1997	16:16		24.05	6.79		
LW006D	01/27/1998	11:38	30.84	19.94	10.90		
LW006D	05/18/1998	17:28		19.36	11.48		

7/19/05 \\Edmdata\\wproc\231\009\132\\PhiII RI 071905\\PhiII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

Mall	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
Well				24.92	5.92		
LW006D	08/17/1998	10:05	30.84 30.84	25.94	4.90		
LW006D	11/13/1998 02/16/1999	09:50 13:11	30.84	20.40	10.44		
LW006D LW006D	05/18/1999	14:53	30.84	19.81	11.03		
FM009D	09/21/1999	11:32	30.84	25.92	4.92		
LW006D	12/06/1999	14:09	30.84	20.86	9.98		
LW006D	02/16/2000	10:20	30.84	21.27	9.57		
LW006D	05/23/2000	16:35	30.84	21.64	9.20		
LW006D	08/29/2000	13:20	30.84	25.93	4.91		
LW006D	11/09/2000	12:35	30.84	26.21	4.63		
LW006D	02/12/2001	16:03	30.84	25.37	5.47		
LW006D	06/04/2001	11:42	30.84	25.30	5.54		
LW006D	08/16/2001	10:54	30.84	26.72	4.12		
LW006D	11/28/2001	11:46	30.84	24.92	5.92		
LW006D	02/27/2002	13:35	30.84	23.62	7.22		
LW006D	06/27/2002	14:19	30.84	20.68	10.16		
LW006D	08/26/2002	16:04	30.84	25.79	5.05		
LW006D	11/13/2002	07:42	30.84	25.82	5.02		
LW006D	02/11/2003	09:01	30.84	24.08	6.76		
LW006D	05/08/2003	07:01	30.84	21.97	8,87		
LW006D	08/27/2003	13:40	30.84	25.37	5.47		
LW006D	10/23/2003	12:31	30.84	26.47	4.37		
LW006D	02/19/2004	12:37	30.84	23.00	7.84		
LW006D	06/09/2004	08:00	30.84	21.90	8.94		
LW006D	08/10/2004	08:42	30.84	26,22	4.62		
LW006D	08/10/2004	10:20	30.84	26.43	4.41		
LW006D	11/18/2004	07:51	30.84	25.61	5.23		
LW009D	05/18/1999	14:56	30.98	20.02	10.96		
LW009D	09/21/1999	11:34	30.98	25,23	5.75		
LW009D	12/06/1999	14:11	30.98	21.04	9.94		
LW009D	02/16/2000	10:23	30.98	21.17	9.81		
LW009D	05/23/2000	16:39	30.98	21.15	9.83		
LW009D	08/29/2000	13:27	30.98	25.36	5.62		
LW009D	11/09/2000	12:43	30.98	25.96	5.02		
LW009D	02/12/2001	16:11	30.98	25.13	5.85		
LW009D	06/04/2001	11:49	30.98	25.15	5.83		
LW009D	08/16/2001	11:02	30.98	26.57	4.41		
LW009D	11/28/2001	11:53	30.98	25.40	5.58		
LW009D	02/27/2002	13:47	30.98	22.97	8.01		
LW009D	06/27/2002	14:25	30.98	20.38	10.60		
LW009D	08/26/2002	16:11	30.98	24.90	6.08		
LW009D	11/13/2002	07:48	30.98	25.73	5.25 8.95		
LW009D	02/11/2003	09:07	30.98	22.03 21.65	9.33		
LW009D	05/08/2003	07:12	30.98	25.50	5.48		
LW009D	08/27/2003	13:47	30.98	26.22	4.76		
LW009D	10/23/2003	12:50	30.98 30.98	22.55	8.43	*****	
LW009D	02/19/2004	13:02	30.98	21.91	9.07		
LW009D	06/09/2004	08:11 08:14	30.98	25.49	5.49		
LW009D	08/10/2004 08/10/2004	09:59	30.98	25.54	5.44		
LW009D	11/18/2004	07:44	30.98	25.36	5.62		
LW009D	11/10/2004	07.44	00.00	20.00	0.02		
LW010D	05/18/1999	15:00	31.12	19.82	11.30		
LW010D	09/21/1999	11:37	31.12	25.81	5.31		
LW010D	12/06/1999	14:15	31.12	21.18	9.94		
LW010D	02/16/2000	10:27	31.12	21.20	9.92		
LW010D	05/23/2000	16:42	31.12	21.51	9.61		
LW010D	08/29/2000	13:29	31.12	25,86	5.26		
LW010D	11/09/2000	12:46	31.12	26.26	4.86		
LW010D	02/12/2001	16:15	31.12	25.63	5.49		
LW010D	06/04/2001	11:52	31.12	25.62	5.50		
LW010D	08/16/2001	11:04	31.12	27.16	3.96		
LW010D	11/28/2001	11:55	31.12	25.46	5.66		
LW010D	02/27/2002	13:49	31.12	23.58	7.54		
LW010D	06/27/2002	14:29	31.12	21.03	10.09		
LW010D	08/26/2002	16:17	31.12	25.91	5.21		
LW010D	11/13/2002	08:01	31.12	26.17	4.95		
LW010D	02/11/2003	09:21	31.12	23.83	7.29		
LW010D	05/08/2003	07:33	31.12	22.10	9.02		
LW010D	08/27/2003	13:53	31.12	25.74	5.38		
LW010D	10/23/2003	13:10	31.12	26.79	4.33		
LW010D	02/19/2004	13:25	31.12	22.98	8.14		
LW010D	06/09/2004	08:23	31.12	22.46	8,66		
LW010D	08/10/2004	08:16	31.12	26.52	4.60		

LW010D	
LW011D 05/18/1999 15:09 29.04 18.59 10.45 LW011D 09/21/1999 11:50 29.04 20.76 8.28 LW011D 12/06/1999 15:06 29.04 21.81 7.23 LW011D 02/16/2000 11:02 29.04 20.35 8.69 LW011D 05/23/2000 17:37 29.04 19.50 9.54 LW011D 08/29/2000 14:54 29.04 Well purged dry 8/28; sampled a.m. on 8/29 LW011D 11/09/2000 29.04 Well sampled 11/8/00 - water level not repre LW011D 02/12/2001 15:16 29.04 23.14 5.90 LW011D 06/04/2001 13:11 29.04 23.35 5.69 LW011D 08/16/2001 11:25 29.04 26.94 2.10 LW011D 11/28/2001 12:53 29.04 26.94 2.10 LW011D 02/27/2002 14:57 29.04 21.80 7.24 LW011D 06/27/2002 15:11 29.04 18.84 10.20 LW011D 08/26/2002 16:47 29.04 22.71 6.33 LW011D 08/26/2002 16:47 29.04 22.71 6.33 LW011D 02/11/2003 10:04 29.04 21.79 7.25 LW011D 02/11/2003 10:04 29.04 21.79 7.25 LW011D 08/27/2003 14:34 29.04 23.35 5.69 LW011D 05/08/2003 08:08 29.04 19.28 9.76 LW011D 08/27/2003 14:34 29.04 23.35 5.69 LW011D 08/27/2003 14:34 29.04 23.35 5.69 LW011D 08/27/2003 14:34 29.04 23.35 5.69 LW011D 02/19/2004 14:05 29.04 23.98 5.06 LW011D 02/19/2004 14:05 29.04 21.08 7.96 LW011D 02/19/2004 14:05 29.04 21.08 7.96 LW011D 06/09/2004 08:55 29.04 20.04 9.00	
LW011D         09/21/1999         11:50         29.04         20.76         8.28	
LW011D         09/21/1999         11:50         29.04         20.76         8.28	
LW011D         02/16/2000         11:02         29.04         20.35         8.69            LW011D         05/23/2000         17:37         29.04         19.50         9.54            LW011D         08/29/2000         14:54         29.04            Well purged dry 8/28; sampled a.m. on 8/29           LW011D         11/09/2000         29.04           Well sampled 11/8/00 - water level not repre           LW011D         02/12/2001         15:16         29.04         23.14         5.90            LW011D         06/04/2001         13:11         29.04         23.35         5.69            LW011D         08/16/2001         11:25         29.04         26.94         2.10            LW011D         01/28/2001         12:53         29.04         24.54         4.50            LW011D         06/27/2002         15:11         29.04         21.80         7.24            LW011D         08/26/2002         16:47         29.04         22.71         6.33            LW011D         02/11/2003         10:04         29.04         21.79	
LW011D         05/23/2000         17:37         29.04         19.50         9.54          Well purged dry 8/28; sampled a.m. on 8/29           LW011D         08/29/2000         14:54         29.04            Well purged dry 8/28; sampled a.m. on 8/29           LW011D         02/12/2001         15:16         29.04         23.14         5.90            LW011D         06/04/2001         13:11         29.04         23.35         5.69            LW011D         08/16/2001         11:25         29.04         26.94         2.10            LW011D         11/28/2001         12:53         29.04         24.54         4.50            LW011D         06/27/2002         14:57         29.04         21.80         7.24            LW011D         06/27/2002         16:47         29.04         22.71         6.33            LW011D         11/13/2002         08:55         29.04         21.79         7.25            LW011D         02/11/2003         14:34         29.04         21.79         7.25            LW011D         08/27/2003         14:34	
LW011D         08/29/2000         14:54         29.04            Well purged dry 8/28; sampled a.m. on 8/29           LW011D         11/09/2000         29.04            Well sampled 11/8/00 - water level not repre           LW011D         06/04/2001         15:16         29.04         23.14         5.90            LW011D         06/04/2001         13:11         29.04         23.35         5.69            LW011D         08/16/2001         11:25         29.04         24.54         4.50            LW011D         02/27/2002         14:57         29.04         21.80         7.24            LW011D         06/27/2002         15:11         29.04         21.80         7.24            LW011D         08/26/2002         16:47         29.04         22.71         6.33            LW011D         01/13/2002         855         29.04         23.87         5.17            LW011D         05/08/2003         10:04         29.04         21.79         7.25            LW011D         08/27/2003         14:34         29.04	
LW011D         11/09/2000         29.04           Well sampled 11/8/00 - water level not repre           LW011D         02/12/2001         15:16         29.04         23.14         5.90            LW011D         06/04/2001         13:11         29.04         23.35         5.69            LW011D         08/16/2001         11:25         29.04         26.94         2.10            LW011D         11/28/2001         12:53         29.04         24.54         4.50            LW011D         02/27/2002         14:57         29.04         21.80         7.24            LW011D         06/27/2002         15:11         29.04         21.80         7.24            LW011D         08/26/2002         16:47         29.04         22.71         6.33            LW011D         08/26/2002         16:47         29.04         22.87         5.17            LW011D         02/11/2003         10:04         29.04         21.79         7.25            LW011D         05/08/2003         08:08         29.04         23.95         5.06	
LW011D       02/12/2001       15:16       29.04       23.14       5.90          LW011D       06/04/2001       13:11       29.04       23.35       5.69          LW011D       08/16/2001       11:25       29.04       26.94       2.10          LW011D       01/28/2001       12:53       29.04       24.54       4.50          LW011D       02/27/2002       14:57       29.04       21.80       7.24          LW011D       06/27/2002       15:11       29.04       21.80       7.24          LW011D       08/26/2002       16:47       29.04       22.71       6.33          LW011D       11/13/2002       08:55       29.04       23.87       5.17          LW011D       02/11/2003       10:04       29.04       21.79       7.25          LW011D       05/08/2003       08:08       29.04       19.28       9.76          LW011D       10/23/2003       14:34       29.04       23.98       5.69          LW011D       02/19/2004       14:05       29.04       21.08       7.96	SSO RALIVO
LW011D       06/04/2001       13:11       29.04       23.35       5.69          LW011D       08/16/2001       11:25       29.04       26.94       2.10          LW011D       11/28/2001       12:53       29.04       24.54       4.50          LW011D       02/27/2002       14:57       29.04       21.80       7.24          LW011D       06/27/2002       15:11       29.04       18.84       10.20          LW011D       08/26/2002       16:47       29.04       22.71       6.33          LW011D       11/13/2002       08:55       29.04       23.87       5.17          LW011D       02/11/2003       10:04       29.04       21.79       7.25          LW011D       05/08/2003       08:08       29.04       19.28       9.76          LW011D       08/27/2003       14:34       29.04       23.35       5.69          LW011D       10/23/2003       14:11       29.04       23.98       5.06          LW011D       06/09/2004       08:55       29.04       21.08       7.96	
LW011D       11/28/2001       12:53       29.04       24.54       4.50          LW011D       02/27/2002       14:57       29.04       21.80       7.24          LW011D       06/27/2002       15:11       29.04       18.84       10.20          LW011D       08/26/2002       16:47       29.04       22.71       6.33          LW011D       11/13/2002       08:55       29.04       23.87       5.17          LW011D       02/11/2003       10:04       29.04       21.79       7.25          LW011D       05/08/2003       08:08       29.04       19.28       9.76          LW011D       08/27/2003       14:34       29.04       23.35       5.69          LW011D       10/23/2003       14:11       29.04       23.98       5.06          LW011D       02/19/2004       14:05       29.04       21.08       7.96          LW011D       06/09/2004       08:55       29.04       20.04       9.00	
LW011D       02/27/2002       14:57       29.04       21.80       7.24          LW011D       06/27/2002       15:11       29.04       18.84       10.20          LW011D       08/26/2002       16:47       29.04       22.71       6.33          LW011D       11/13/2002       08:55       29.04       23.87       5.17          LW011D       02/11/2003       10:04       29.04       21.79       7.25          LW011D       05/08/2003       08:08       29.04       19.28       9.76          LW011D       08/27/2003       14:34       29.04       23.85       5.69          LW011D       10/23/2003       14:11       29.04       23.98       5.06          LW011D       02/19/2004       14:05       29.04       21.08       7.96          LW011D       06/09/2004       08:55       29.04       20.04       9.00	
LW011D       06/27/2002       15:11       29.04       18.84       10.20          LW011D       08/26/2002       16:47       29.04       22.71       6.33          LW011D       11/13/2002       08:55       29.04       23.87       5.17          LW011D       02/11/2003       10:04       29.04       21.79       7.25          LW011D       05/08/2003       08:08       29.04       19.28       9.76          LW011D       08/27/2003       14:34       29.04       23.35       5.69          LW011D       10/23/2003       14:11       29.04       23.98       5.06          LW011D       02/19/2004       14:05       29.04       21.08       7.96          LW011D       06/09/2004       08:55       29.04       20.04       9.00	
LW011D       08/26/2002       16:47       29.04       22.71       6.33          LW011D       11/13/2002       08:55       29.04       23.87       5.17          LW011D       02/11/2003       10:04       29.04       21.79       7.25          LW011D       05/08/2003       08:08       29.04       19.28       9.76          LW011D       08/27/2003       14:34       29.04       23.35       5.69          LW011D       10/23/2003       14:11       29.04       23.98       5.06          LW011D       02/19/2004       14:05       29.04       21.08       7.96          LW011D       06/09/2004       08:55       29.04       20.04       9.00	
LW011D     11/13/2002     08:55     29.04     23.87     5.17        LW011D     02/11/2003     10:04     29.04     21.79     7.25        LW011D     05/08/2003     08:08     29.04     19.28     9.76        LW011D     08/27/2003     14:34     29.04     23.35     5.69        LW011D     10/23/2003     14:11     29.04     23.98     5.06        LW011D     02/19/2004     14:05     29.04     21.08     7.96        LW011D     06/09/2004     08:55     29.04     20.04     9.00	
LW011D     02/11/2003     10:04     29.04     21.79     7.25        LW011D     05/08/2003     08:08     29.04     19.28     9.76        LW011D     08/27/2003     14:34     29.04     23.35     5.69        LW011D     10/23/2003     14:11     29.04     23.98     5.06        LW011D     02/19/2004     14:05     29.04     21.08     7.96        LW011D     06/09/2004     08:55     29.04     20.04     9.00	
LW011D     08/27/2003     14:34     29.04     23.35     5.69        LW011D     10/23/2003     14:11     29.04     23.98     5.06        LW011D     02/19/2004     14:05     29.04     21.08     7.96        LW011D     06/09/2004     08:55     29.04     20.04     9.00	
LW011D     10/23/2003     14:11     29.04     23.98     5.06        LW011D     02/19/2004     14:05     29.04     21.08     7.96        LW011D     06/09/2004     08:55     29.04     20.04     9.00	
LW011D     02/19/2004     14:05     29.04     21.08     7.96        LW011D     06/09/2004     08:55     29.04     20.04     9.00	
LW011D 06/09/2004 08:55 29.04 20.04 9.00	
LW011D 08/10/2004 10:20 29:04 24.46 4.58	
LW011D 11/18/2004 08:11 29.04 23.67 5.37	
1940-1951	
LW012D1 05/18/1999 15:13 30.02 18.45 11.57 LW012D1 09/21/1999 11:54 30.02 24.44 5.58	
LW012D1 09/21/1999 11:54 30.02 24.44 5.58 LW012D1 12/06/1999 14:21 30.02 19.72 10.30	
LW012D1 02/16/2000 10:35 30.02 19.89 10.13	
LW012D1 05/23/2000 17:00 30.02 20.23 9.79	
LW012D1 08/29/2000 13:45 30.02 24.38 5.64	
LW012D1 11/09/2000 13:00 30.02 24.66 5.36	
LW012D1 02/12/2001 15:57 30.02 23.92 6.10	
LW012D1 06/04/2001 12:32 30.02 23.99 6.03 LW012D1 08/16/2001 11:42 30.02 25.39 4.63	
LW012D1 11/28/2001 12:38 30.02 23.33 6.69	
LW012D1 02/27/2002 14.28 30.02 21.88 8.14	
LW012D1 06/27/2002 14:57 30.02 19.58 10.44	
LW012D1 Abandoned August 2003	
LW012D2 05/18/1999 15:14 29:24 18:23 11:01	
LW012D2 09/21/1999 11:53 29:24 24:69 4:55	
LW012D2 12/06/1999 14:22 29.24 19.40 9.84	
LW012D2 02/16/2000 10:36 29.24 19.90 9.34	
LW012D2 05/23/2000 16:59 29.24 20.38 8.86	
LW012D2 08/29/2000 13:44 29.24 24.68 4.56 LW012D2 11/09/2000 13:01 29.24 24.56 4.68	
LW012D2 11/09/2000 13:01 29.24 24.56 4.68 LW012D2 02/12/2001 15:56 29.24 23.88 5.36	
LW012D2 06/04/2001 12:31 29:24 24:10 5.14	
LW012D2 08/16/2001 11:43 29.24 25.43 3.81	
LW012D2 11/28/2001 12:39 29.24 23.17 6.07	
LW012D2 02/27/2002 14:29 29.24 22.38 6.86	
LW012D2 06/27/2002 14:58 29.24 19.44 9.80 LW012D2 Abandoned August 2003	
LYV 12D2 Abandoned Adgust 2003	
LW014D 05/23/2000 16:50 30.54 21.26 9.28	
LW014D 08/29/2000 13:35 30.54 25.68 4.86	
LW014D 11/09/2000 12:49 30.54 25.90 4.64	
LW014D 02/12/2001 16:20 30.54 25.33 5.21	
LW014D     06/04/2001     12:00     30.54     25.37     5.17        LW014D     08/16/2001     11:08     30.54     27.00     3.54	
LW014D 11/28/2001 11:56 30.54 25.03 5.51	
LW014D 02/27/2002 13:55 30.54 23.57 6.97	
LW014D 06/27/2002 14:33 30.54 20.70 9.84	
LW014D 08/26/2002 16:26 30.54 25.90 4.64	
LW014D 11/13/2002 08:07 30.54 25.76 4.78	
LW014D 02/11/2003 09:27 30.54 24.33 6.21 LW014D 05/08/2003 07:38 30.54 21.92 8.62	
LW014D 08/27/2003 13:56 30.54 25.32 5.22	
LW014D 10/23/2003 13:13 30.54 26.56 3.98	
LW014D 02/19/2004 13:30 30.54 22.86 7.68	
LW014D 06/09/2004 08:27 30.54 22.11 8.43	

7/19/05 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvt/GWL All

Landau Associates

	Б.,	<b>T</b> :	Reference	DTW	GW Elevation	LNAPL	Notes
Well	Date	Time	Elevation (ft) (a)		(ft) (c)	Thickness (ft)	NOTES
LW014D LW014D	08/10/2004 08/10/2004	08:20 10:05	30.54 30.54	26,29 26,58	4,25 3,96		
LW014D	11/18/2004	07:57	30.54	25.74	4,80		
LW015D	05/23/2000	16:49	30,85	21.26	9,59		
LW015D	08/29/2000	13:34	30.85	25.54	5.31		
LW015D LW015D	11/09/2000 02/12/2001	12:48 16:18	30.85 30.85	25.98 25.43	4.87 5.42		
LW015D	06/04/2001	11:59	30.85	25.41	5.44		
LW015D	08/16/2001	11:07	30.85	27.05	3,80		
LW015D	11/28/2001	11:55	30.85	25.29	5.56		
LW015D	02/27/2002	13:52	30.85	23.42	7.43		
LW015D	06/27/2002	14:32	30.85	20.91	9.94		
LW015D LW015D	08/26/2002 11/13/2002	16:25 08:05	30.85 30.85	25.77 26.04	5.08 4.81		
LW015D	02/11/2003	09:23	30.85	23.65	7.20		
LW015D	05/08/2003	07:37	30.85	21.95	8.90		
LW015D	08/27/2003	13:55	30.85	25.58	5.27		
LW015D	10/23/2003	13:12	30.85	26.61	4.24		
LW015D	02/19/2004	13:30	30.85	22.83	8.02		
LW015D	06/09/2004	08:25	30.85	22.36	8.49		
LW015D	08/10/2004	08:19	30.85	26.43	4.42		
LW015D LW015D	08/10/2004 11/18/2004	10:04 07:55	30.85 30.85	26.61 25.98	4.24 4.87	2727	
2110100	1 17 10/2004	07.00	55.55	20,00	4,57		
LW016D	05/23/2000	16:48	28.40	18.79	9.61		
LW016D	08/29/2000	13:32	28.40	23.07	5.33		
LW016D	11/09/2000	12:47	28.40	23.59	4.81	****	
LW016D	02/12/2001	16:17	28.40	22.94	5.46	****	
LW016D LW016D	06/04/2001 08/16/2001	11:57 11:05	28.40 28.40	23.00 24.43	5.40 3.97		
LW016D	11/28/2001	11:57	28.40	22.87	5.53	****	
LW016D	02/27/2002	13:54	28.40	20.94	7.46		
LW016D	06/27/2002	14:31	28,40	18.46	9.94	****	
LW016D	08/26/2002	16:23	28.40	23.24	5.16		
LW016D	11/13/2002	08:08	28.40	23.45	4.95		
LW016D	02/11/2003	09:25	28.40	21.14	7.26		
LW016D	05/08/2003	07:36	28.40	19.65	8.75		
LW016D LW016D	08/27/2003 10/23/2003	13:54 13:11	28.40 28.40	23.08 24.10	5.32 4.30		
LW016D	02/19/2004	13:31	28.40	20.30	8.10		
LW016D	06/09/2004	08:26	28.40	19.91	8.49		
LW016D	08/10/2004	08:17	28.40	23.88	4.52		
LW016D	08/10/2004	10:03	28.40	24.08	4.32		
LW016D	11/18/2004	07:54	28.40	23.41	4.99		
LW017D	08/29/2000	13:21	27.82	22.96	4.86		
LW017D	11/09/2000	12:36	27.82	23.17	4.65		
LW017D	02/12/2001	16:04	27.82	22.44	5,38		
LW017D	06/04/2001	11:44	27.82	22.42	5.40	~~~	
LW017D	08/16/2001	10:55	27.82	23,80	4.02	****	
LW017D	11/28/2001	11:50	27.82	22.00	5.82		
LW017D LW017D	02/27/2002 03/05/2002	13:37 11:30	27.82	19.82 20.46	8.00 7.36		
LW017D LW017D	04/05/2002	08:15	27.82 27.82	21.34	6.48		
LW017D	05/29/2002	00:00	27.82	17.90	9.92		
LW017D	06/27/2002	14:20	27.82	17.64	10.18		
LW017D	08/26/2002	16:07	27.82	22.67	5.15		
LW017D	11/13/2002	07:45	27.82	22.80	5.02		
LW017D	02/11/2003	09:03	27.82	20.79	7.03		
LW017D	05/08/2003	07:05	27.82	18.82	9.00	****	
LW017D	08/27/2003	13:43	27.82	22.38	5.44		
LW017D LW017D	10/23/2003 02/19/2004	12:34 12:52	27.82 27.82	23.46 19.82	4.36 8.00		
LW017D	06/09/2004	08:04	27.82 27.82	19.02	8.82		
LW017D	08/10/2004	08:44	27.82	23.21	4.61		
LW017D	08/10/2004	10:23	27.82	23.41	4.41		
LW017D	11/18/2004	08:04	27.82	22.69	5.13		
I WOTOD	00/20/2000	12:05	97.89	22.70	5.02		
LW018D LW018D	08/29/2000 11/09/2000	13:25 12:40	27.82 27.82	22.79 22.91	5.03 4.91		
LW018D	02/12/2001	16:10		22.56	5.26		
LW018D	06/04/2001	11:47		22.28	5.54		
LW018D	08/16/2001	11:00		23.81	4.01		
LW018D	11/28/2001	11:51	27.82	22.00	5.82		

7/19/05 \\Edmdata\wproc\231\009\132\PhIII RI 071905\PhIII RI Rpt\_Tb B-1 Quarterly Event

Source: S:/Sheets/TimeOil/WaterLvl/GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
	02/27/2002	13:43	27.82	20.44	7.38		· · · · · · · · · · · · · · · · · · ·
LW018D	06/27/2002	14:23	27.82 27.82	17.72	10.10		
LW018D LW018D	08/26/2002	16:13	27.82	21.90	5.92		
LW018D	11/13/2002	07:51	27.82	22.71	5.11		
LW018D	02/11/2003	07:01	27.82	20.95	6.87		
LW018D	05/08/2003	07:10	27.82	18.75	9.07		
	08/27/2003	13:45	27.82	22.41	5.41		
LW018D LW018D	10/23/2003	12:45	27.82	23.46	4.36		
LW018D	02/19/2004	13:10	27.82	19.74	8.08		
LW018D	06/09/2004	08:07	27.82	19.45	8.37		
LW018D	08/10/2004	08:11	27.82	23.26	4.56	****	
LW018D	08/10/2004	09:54	27.82	23.46	4.36		
LW018D	11/18/2004	08:02	27.82	22.87	4.95		
LVVUIOD	11/16/2004	00.02	21.02	22.01	4.33		
LW020D	10/23/2003	12:15	29.51	24.86	4.65		
LW020D	02/19/2004	14:46	29.51	21.00	8.51	***	
LW020D	06/09/2004	07:48	29.51	20.45	9.06		
LW 020D	08/10/2004	08:32	29.51	24.70	4.81		
LW020D	08/10/2004	10:08	29.51	24.90	4.61		
LW020D	11/18/2004	07:48	29.51	24.17	5.34		
LVVOZOD	11/10/2004	07.40	23.31	24.17	3.34		
LW022D	10/23/2003	11:58	32.56	27.72	4.84		
LW022D LW022D	02/19/2004	12:14	32.56 32.56	24.44	4.84 8.12		
LW022D LW022D	06/09/2004	07:22	32.56	23.35	9.21		
LW022D	08/10/2004	08:16	32.56	27.20	5,36 5.35		
LW022D	08/10/2004	09:55	32.56	27.21	5.35		
LW022D	11/18/2004	07:24	32.56	26.69	5.87		
LWOODD	10/23/2003	10:00	31.41	26.56	105		
LW023D		12:00		23.31	4.85		
LW 023D LW 023D	02/19/2004	12:13	31.41		8.10		
	06/09/2004	07:21	31.41	22.24	9.17		
LW023D	08/10/2004	08:13	31.41	26.08	5.33		
LW023D	08/10/2004	09:53	31.41	26.09	5.32		
LW023D	11/18/2004	07:22	31.41	25.58	5.83		
LWOOAD	10/23/2003	10:00	22.47	28.61	4.86		
LW024D		12:23	33.47				
LW024D	02/19/2004	12:40	33.47	25.28	8.19		
LW024D	06/09/2004	07:57	33.47	24.30	9.17		
LW024D	08/10/2004	08:36	33.47	28.02	5.45		
LW024D	08/10/2004	10:15	33.47	28.04	5.43		
LW024D	11/18/2004	07:54	33.47	27.65	5.82		
LWOSED	10/09/0009	10:00	o# 20	20.50	4 00		
LW025D	10/23/2003	12:28	35.38	30.50	4.88		
LW025D	02/19/2004	12:38	35.38	27.25	8.13		
LW 025D	06/09/2004	07:59	35.38	26.26	9.12		
LW025D	08/10/2004	08:40	35,38	29.94	5.44		
LW025D	08/10/2004	10:17	35.38	29.96	5.42		
LW025D	11/18/2004	07:48	35.38	29.59	5.79		
LWOOD	10/09/0009	10:00	24.40	07.17	4 20		
LW026D	10/23/2003	12:09	31.49	27.17	4.32 7.85		
LW026D	02/19/2004 06/09/2004	12:22	31.49	23.64 22.67	8.82		
LW026D	08/10/2004	07:37 08:26	31.49	27.03	4.46		
LW026D LW026D	08/10/2004	10:05	31.49 31.49	27.31	4.18		
	11/18/2004	07:36	31.49	26.49	5.00		
LW 026D	11/10/2004	07.30	31.43	20.43	3,00	4-2-5	
LW027D	10/23/2003	12:21	29.71	25.47	4.24	***	
LW027D	02/19/2004	12:43	29.71	21.96	7.75	***	
LW027D LW027D	06/09/2004	07:38	29.71	20.97	8.74		
LW027D LW027D	08/10/2004	07.38	29.71 29.71	25.34	4.37		
	08/10/2004						
LW027D		10:12	29.71	25.65	4.06		
LW027D	11/18/2004	07:38	29.71	24.78	4.93		
LW029D	10/23/2003	14:40	31.12	26.45	4.67		
LW029D LW029D	02/19/2004	15:31	31.12	22.55	8.57		
LW029D	06/09/2004	09:44	31.12	22.16	8.96		
LW029D	08/10/2004	08:28	31.12	26.28	4.84		
LW029D	08/10/2004	10:12	31.12	26.52	4.60		
LW029D	11/18/2004	08:13	31.12	25.80	5.32		
LW030D	10/23/2003	14:52	30.06	25.58	4.48	~~~	
LW030D	02/19/2004	15:33		21.55	8.51		
LW 030D	06/09/2004	09:47		21.21	8.85		
LW030D	08/10/2004	08:30		25.58	4.48		
LW030D	08/10/2004	10:14		25.36 25.87	4.19		
FAA 020D	00/10/2004	10.14	30,00	٧٠.٠/	7.10		

Landau Associates

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
LW 030D	11/18/2004	08:15	30.06	25.01	5.05		
LW032D	10/23/2003	14:33	30.86	25.23	5.63		
LW032D	02/19/2004	15:28	30.86	21.95	8.91		
LW032D	06/09/2004	09:59	30.86	21.41	9.45		
LW 032D LW 032D	08/10/2004 08/10/2004	08:33 10:16	30,86 30,86	25.24 25.42	5.62 5.44		
LW 032D LW 032D	11/18/2004	08:18	30.86	24.63	6.23		
LVVOOZD	17710/2004	00.10	00.00	24.00	0.20		
LW 035D	10/23/2003	11:48	33,19	28.33	4.86		
LW 035D	02/19/2004	12:34	33.19	24.86	8.33		
LW 035D	06/09/2004	07:24	33.19	23.88	9.31		
LW 035D	08/10/2004	08:19	33.19	27.62	5.57		
LW035D	08/10/2004	09:57	33.19	27.65	5.54		
LW 035D	11/18/2004	07:27	33.19	27.31	5.88	7050	
LW036D	11/18/2004	07:25	11.30	5.59	5.71		
LW037D	11/18/2004	07:30	10.84	5.35	5.49		
LW 038D	11/18/2004	07:34	10.21	5.22	4.99		
LW 039D	11/18/2004	07:39	9.35	4.03	5.32	****	
LW 040D			34.28				
LW045D	11/18/2004	07:29	33.36	27.53	5.83		
OX008D	10/23/2003	13:48	30.84	26.12	4.72	40 to 10 at	
OX008D	02/19/2004	14:20	30,84	22.52	8.32		
OX008D	06/09/2004	09:10	30.84	21.77	9.07		
OX008D	08/10/2004	08:37	30.84	25.90	4.94		
OX008D	08/10/2004	10:23	30.84	26.09	4.75		
OX008D	11/18/2004	08:25	30.84	25.25	5.59		
RW2	05/18/1999	15:02	30.68	19.50	11.18		
RW2	09/21/1999	11:40	30.68	25.75	4.93		
RW2	12/06/1999	14:17	30.68	20.77	9.91		
RW2	02/16/2000	10:29	30.68	20.99	9.69		
RW2	05/23/2000	16:52	30.68	21.37	9.31		
RW2	08/29/2000	13:36	30.68	25.36	5.32	****	
							Croundwater interim action numerical houses 10/E/00 in the laws
DWO	4.4/00/0000	10:50	20.00	05.00	4.05		Groundwater interim action pumping began 10/5/00 in the lower
RW2 RW2	11/09/2000 02/12/2001	12:50 16:37	30.68 30.68	25.83 26.40	4.85 4.28		zone at this well. Pump not running at time of measurement.
RW2	06/04/2001	12:05	30.68	26.26	4.42		
RW2	08/16/2001	11:11	30.68	28.98	1.70		
RW2	11/28/2001	12:02	30.68	26.86	3.82		
RW2	02/27/2002	13:57	30.68	26.02	4.66		
RW2	06/27/2002	14:35	30.68	23.68	7.00	****	
RW2	08/26/2002	16:29	30,68	28.26	2.42		
RW2	11/13/2002	08:20	30.68	28.50	2.18		
RW2	02/11/2003	09:29	30.68	26.96	3.72		Data of management is about a smaller
RW2	05/07/2003	17:30	30.68	24.80	5.88		Date of measurement is day of sampling
RW2 RW2	08/27/2003 10/23/2003	13:57 13:30	30.68 30.68	27.91 28.73	2.77 1.95		
RW2	02/19/2004	13:43	30.68	25.53	5.15		
RW2	06/10/2004	08:13	30.68	25.19	5.49		
RW2	08/10/2004	08:23	30.68	29.55	1.13		
RW2	08/10/2004	10:07	30.68	29.74	0.94		
RW2	11/18/2004	08:05	30.68	29.50	1.18		
RIVER_GAUGE RIVER_GAUGE	08/11/1993 10/26/1993	12:57 13:17	28.13 28.13	24.90 25.27	3.23 2.86		
RIVER_GAUGE	11/17/1993	13:21	28.13	24.18	3.95		
RIVER_GAUGE	12/17/1993	12:46	28.13	22.48	5.65		
RIVER_GAUGE	01/17/1994	12:58	28.13	22.90	5,23		
RIVER_GAUGE	02/18/1994	14:10	28.13	22.30	5.83		
RIVER_GAUGE	03/18/1994	12:48	28.13	21.70	6.43		
RIVER_GAUGE RIVER_GAUGE	04/18/1994 05/18/1994	14:34 15:14	28.13	23.50 21.80	4.63 6.33		
RIVER_GAUGE	06/17/1994	14:45	28.13 28.13	21.32	6.81		
RIVER_GAUGE	07/19/1994	09:10	28.13	23.25	4.88		
RIVER_GAUGE	08/17/1994	07:26	28.13	24.00	4.13		

7/19/05 \\Edmdata\\wproc\231\009\132\\PhIII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvI/GWL All

	D-4-	Time	Reference	DTW	GW Elevation	LNAPL Thickness (ft)	NOTES
Well	Date	Time	Elevation (ft) (a)	(ft) (b)	(ft) (c)		
RIVER_GAUGE	09/16/1994	07:30	28.13 28.13	24.66 24.10	3.47 4.03		
RIVER_GAUGE RIVER_GAUGE	10/17/1994 11/21/1994	08:58 11:43	28.13	23.20	4.93		
RIVER_GAUGE	12/19/1994	10:58	28.13	19.95	8.18		
RIVER_GAUGE	01/18/1995	11:04	28.13	16.70	11.43		
RIVER_GAUGE	02/21/1995	13:14	28.13	14.65	13.48		
RIVER_GAUGE	03/21/1995	12:58	28.13	18.90	9.23		
RIVER_GAUGE	04/19/1995	12:37	28.13	19.80	8.33 10.73		
RIVER_GAUGE	05/19/1995 07/17/1995	13:22 13:48	28.13 28.13	17.40 22.00	6.13		
RIVER_GAUGE RIVER_GAUGE	08/22/1995	07:45	28.13	23.24	4.89		
RIVER_GAUGE	09/22/1995	08:19	28.13	24.26	3.87		
RIVER_GAUGE	11/20/1995	07:50	28.13	20.20	7.93		
RIVER_GAUGE	12/01/1995	08:23	28.13	8.45	19.68		
RIVER_GAUGE	12/19/1995	07:11	28.13	14.10	14.03		
RIVER_GAUGE	01/19/1996	08:29	28.13	14.06	14.07		
RIVER_GAUGE	02/20/1996	10:36	28.13 28.13	8.00 15.95	20.13 12.18		
RIVER_GAUGE RIVER_GAUGE	03/19/1996 04/19/1996	09:15 11:45	28.13	13.95	14.18		
RIVER_GAUGE	07/22/1996	14:18	28.13	22.00	6.13		
RIVER_GAUGE	07/22/1996	15:05	28.13	22.20	5.93		
RIVER_GAUGE	08/20/1996	14:09	28.13	22.80	5.33		
RIVER_GAUGE	08/20/1996	15:10	28.13	23,00	5.13		
RIVER_GAUGE	09/24/1996	07:55	28.13	23.41	4.72 3.88		
RIVER_GAUGE	09/24/1996 10/28/1996	10:15	28.13 28.13	24.25 22.95	5.18		
RIVER_GAUGE	10/28/1996	10:53 12:12	28.13	23.21	4.92		
RIVER_GAUGE RIVER_GAUGE	12/13/1996	12:09	28.13	14.50	13.63		
RIVER_GAUGE	03/25/1997	11:33	28.13	14.60	13.53		
RIVER_GAUGE	03/31/1997		28.13				Locked
RIVER_GAUGE	07/16/1997	06:55	28.13	18.73	9.40		
RIVER_GAUGE	07/16/1997	07:55	28.13	18.84	9.29		
RIVER_GAUGE	07/16/1997	09:14	28.13	18.92	9.21 4.75		
RIVER_GAUGE	10/21/1997 10/21/1997	15:52 16:11	28.13 28.13	23.38 23.44	4.69	****	
RIVER_GAUGE RIVER_GAUGE	10/21/1997	17:55	28.13	23.59	4.54		
RIVER_GAUGE	01/27/1998	10:46	28.13	18.20	9.93		
RIVER_GAUGE	01/27/1998	12:25	28.13	18.31	9.82		
RIVER_GAUGE	01/27/1998	13:56	28.13	17.89	10.24		
RIVER_GAUGE	05/18/1998	17:12	28.13	16.97	11.16		
RIVER_GAUGE	05/18/1998	17:45	28.13	17.15	10.98		
RIVER_GAUGE	08/17/1998	09:58 10:34	28.13 28.13	23.98 24.15	4.15 3.98		
RIVER_GAUGE RIVER_GAUGE	08/17/1998 11/13/1998	09:30	28.13	24.64	3.49		
RIVER_GAUGE	11/13/1998	10:05	28.13	24.45	3.68		
RIVER_GAUGE	02/16/1999	12:40	28.13	19.36	8.77		
RIVER_GAUGE	02/16/1999	13:27	28.13	19.43	8.70		
RIVER_GAUGE	05/18/1999	14:33	28.13	17.24	10.89		
RIVER_GAUGE	05/18/1999	15:19	28.13	17.30	10.83		
RIVER_GAUGE	09/21/1999	11:10	28.13 28.13	24.94 25.03	3.19 3.10		
RIVER_GAUGE RIVER_GAUGE	09/21/1999 12/06/1999	11:59 13:43	28.13	18.24	9.89		
RIVER_GAUGE	12/06/1999	14:25	28.13	18.06	10.07		
RIVER_GAUGE	02/16/2000	10:03	28.13	19.18	8.95		
RIVER_GAUGE	02/16/2000	10:41	28.13	19.07	9.06		
RIVER_GAUGE	05/23/2000	16:12	28.13	19.80	8.33		
RIVER_GAUGE	05/23/2000	17:04	28.13	19.94	8.19 3.50		
RIVER_GAUGE	08/29/2000 08/29/2000	12:54 13:49	28.13 28.13	24.63 24.91	3.22		
RIVER_GAUGE RIVER_GAUGE	11/09/2000	12:19	28.13	24.26	3.87		
RIVER_GAUGE	11/09/2000	13:10	28.13	23.67	4.46		
RIVER_GAUGE	02/12/2001	15:45	28.13	23.75	4.38		
RIVER_GAUGE	02/12/2001	16:43	28.13	24.00	4.13		
RIVER_GAUGE	06/04/2001	11:20	28.13	23.62	4.51		
RIVER_GAUGE	06/04/2001	12:15	28.13	23.79	4.34		
RIVER_GAUGE	08/16/2001	10:20	28.13	24.83 25.23	3.30 2.90		
RIVER_GAUGE	08/16/2001 11/28/2001	11:29 11:16	28.13 28.13	22.50	5.63		
RIVER_GAUGE RIVER GAUGE	11/28/2001	12:18	28.13	23.13	5.00		
RIVER_GAUGE	02/27/2002	13:11	28.13	22.24	5.89		
RIVER_GAUGE	02/27/2002	14:12	28.13	22.27	5.86		
RIVER_GAUGE	03/05/2002	11:25	28.13	21.42	6.71		
RIVER_GAUGE	04/05/2002	08:00	28.13	23.10	5.03		
RIVER_GAUGE	05/29/2002	14:07 14:07	28.13 28.13	17.31 18.31	10.82 9.82		
RIVER_GAUGE	06/27/2002	14.07	20.10	10.01	0.02		

7/19/05 \\Edmdata\wproc\231\009\132\\PhiII RI 071905\\PhIII RI Rpt\_Tb B-1 Quarterly Event Source: S:/Sheets/TimeOil/WaterLvt//GWL All

Well	Date	Time	Reference Elevation (ft) (a)	DTW (ft) (b)	GW Elevation (ft) (c)	LNAPL Thickness (ft)	NOTES
RIVER_GAUGE	06/27/2002	14:43	28.13	18.36	9.77		
RIVER GAUGE	08/26/2002	15:45	28.13	24.83	3.30	****	
RIVER_GAUGE	08/26/2002	16:13	28.13	24,85	3.28		
RIVER_GAUGE	11/13/2002	07:19	28.13	24,10	4.03		
RIVER_GAUGE	11/13/2002	07:54	28.13	24.21	3.92		
RIVER_GAUGE	02/11/2003	08:34	28.13	23.70	4.43		
RIVER_GAUGE	02/11/2003	09:14	28.13	23.43	4.70		
RIVER_GAUGE	05/08/2003	06:40	28.13	20.02	8.11		
RIVER_GAUGE	05/08/2003	07:17	28.13	20.00	8.13		
RIVER_GAUGE	08/27/2003	13:18	28.13	23.36	4.77		
RIVER_GAUGE	08/27/2003	14:15	28.13	23.66	4.47		
RIVER_GAUGE	10/23/2003	11:46	28.13	25.00	3.13		
RIVER_GAUGE	10/23/2003	13:35	28.13	24.94	3.19	****	
RIVER_GAUGE	02/19/2004	12:10	28.13	21.14	6.99		
RIVER_GAUGE	02/19/2004	13:20	28.13	20.89	7.24	****	
RIVER_GAUGE	06/09/2004	07:18	28.13	19.79	8.34		
RIVER_GAUGE	06/09/2004	08:16	28.13	19.78	8.35		
RIVER_GAUGE	08/10/2004	08:10	28.13	24.85	3.28		
RIVER_GAUGE	08/10/2004	08:52	28.13	25.11	3.02		
RIVER_GAUGE	08/10/2004	09:51	28.13	25.43	2.70		
RIVER_GAUGE	08/10/2004	10:35	28.13	25.54	2.59		
RIVER_GAUGE	11/18/2004	07:20	28.13	24.25	3.88		
RIVER_GAUGE	11/18/2004	08:30	28.13	24.65	3.48		

NM = Not measured.

NA = Not available.

<sup>-- =</sup> No measurable product or odor observed.

\* Well Point

<sup>(</sup>a) Reference Elevation (Ref. Elev) is the north side of the top of the 1.25-, 2- or 4-inch well casing, reference elevation surveys were conducted by Zarosinski-Tatone Engineers, Inc., Portland, Oregon. For the river gauge, the reference elevation was measured at a marked location on the south side of the dock on the Willamette River.

<sup>(</sup>b) Depth to water (DTW) measured from surveyed reference elevation [see note (1)].

<sup>(</sup>c) Where LNAPL thickness measured, groundwater elevation adjusted to account for the presence of LNAPL in the well using the method in "Estimation of Free Hydrocarbon Volume from Fluid Levels in Monitoring Wells" [Lenhard and Parker 1990; Groundwater 28(1):57-67].

# **Detected Constituents – Soil Data Summary Tables**

Page 1 of 12

#### TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

												0-0.5	0-0.5	0-0.5	0-0.5	0-0.6	0-0.5	0-0.5	0-0.5	0-0.5
						SCREENING	CRITERIA													
	l							Risk	-Based Concer	trations Volatilization to	Leaching to	-		COMP	COMP	COMP	COMP	COMP	COMP	COMP
Sample identification:							Soil Ingestion	Dermai Contac	t, and inhalation	Outdoor Air	Groundwater	LW4D (0-0.5)	LW6D (0-0.5)	G2 (0-0.5)	G3 (0-0.5)	G8 (0-0.5)	G9 (0-0.5)	G12 (0-0.5)	G13 (0-0.5)	G14 (0-0.5)
Laboratory Identification:		ion 9 PRGs		Oregon 5		Background		Construction				R950A	R950I	0108151-01	0108151-09	0108151-13	0108189-08	0108151-18	0108172-01	0108172-05
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inver	ts	Occupationa	Worker	Worker	Occupational	Occupational	03/12/97	03/13/97	8/20/2001	8/20/2001	8/20/2001	8/24/2001	8/20/2001	8/21/2001	8/21/2001
SEMIVOLATILES (mg/kg) EPA Method SW8270																				
2,6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								NA.	NA	0.330 U	0.330 ⊔	0.330 U	0.330 U	0.330 U	0.330 U	0.330 U
2-Methylnaphthalene	190 (b)			3900 (b)	M-Imagel							NA.	NA.	0.067 U						
Acenaphthene Acenaphthylene	29000 190 (b)	570 84 (b)	20	MOON IEV			41,000	16,000			-	NA NA	NA NA	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U				0.067 U 0.160
Anthracene	100.000	12,000	10 (0)				-	90,000				NA NA	NA NA	0.095	0.067 U	0.067 U		0.067 U		0.160 J
Berizo(a)anthracene	2.1	2					2.7	21	590			NA NA	ŊA	0.330	0 067 U	0.067 U			5.300 J	0.880
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59	-		NA NA	NA NA	0.580	0.080	0.067 U		0.090	8.800 15.000 J	1.400
Benzo(b)fluoranthene Benzo(g,h,i)perylene	2.1 190 (b)	= 5 84 (b)	10 (b)				_			ent compared and the		NA NA	NA NA	0.770 0.350	<b>0.110</b> 0.067 U	0.067 U 0.067 U		0.110 0.067 U	11,000	1.700 J 0.850
Benzo(k)fluoranthene	21	49					27	210	5900		10 H 10	NA NA	NA .	0.250	0.067 U	0.067 U		0.067 U	4.400	0.580
bis(2-Ethylhexyl)phthalate	120	3600 (c)		1020	4.5							NA	NA	0.120	0.099	0.067 U		0.097	0.067 U	
Butylbenzylphthalate Carbazole	100,000 86	930- 0.6	-	1020 (d)	4.5 (d)							NA NA	NA NA	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.140	0.067 U 0.067 U
Chrysene	210	160				- i	270	2100	59,000			NA.	NA NA	0.500	0.067 U	0.067 U		0.067 U	6.400 J	1,100 J
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59	ETR LAST CHARTER LAST COME		NA NA	NA	0.067 U	0.067 U	0.067 U		0.067 U	0.270	0.079
Dibenzoturan	100,000	3600 (c)	000 (-1		0.45 (e)							NA NA	NA NA	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U
Diethylphthalate Dimethylphthalate *=	100,000	3600 (c) 3600 (c)	200 (e) 200 (e)		0.45 (e) 0.45 (e)							NA NA	NA NA	0.067 U	0.067 U	0.067 U			0.067 U	
Di-n-Butylphthalate	62,000	2300	200	30,000	0.45	-						NA	NA	0.067 U	0.067 U	0.067 U	0.067 U	0.067 ∪	0.067 U	0.067 U
Di-n-Octyl phthalate	25,000	10,000	200 (e)		0.45 (e)							NA.		0.260	0.067 U	0,067 U				
Fluoranthene Fluorene	22,000 = 26,000	4300 - 560-			30		29,000 35,000	8900 12,000			-	NA NA	NA NA	1.300 0.067 U	0.089 0.067 U	0.067 U 0.067 U	0.085	0.100 0.067 U	15.000 J 0:170	2.200 J 0.067 U
Hexachloroethane	120	0.5										NA	NA	0.130 U	0.130 U	0.130 U		0.130 U	0.130 U	0.130 U
Indeno(1,2,3-cd)pyrene	2,1	14			Na di San		2.7	21	590			NA NA	. NA	0.280	0.067 U	0.067 U				-0.680
Naphthalene Pentachiorophenoi	190 9.0	84 - 0.03	10	3900			770	710	20,000		15	NA NA	NA NA	0.067 U 0.330 U	0.067 U = 0.330 U	0.067 U		0.067 U - 0.330-U	0.067 U	0.067 U
Phenanthrene	190 (b)	84 (b)			. 4				-			NA NA	NA NA	0.780	0.067 U	-0.330 U 0.340	0.150	0.067 U	6.000 J	0.840 J
Pyrene	29,000	4200					21,000	6700					NA NA	1.500	0.110 J	0.078	0.088	0.130	18.000 J	2.900 J
SEMIVOLATILES (mg/kg)			ļ								i I									
EPA Method SW8270SIM			İ			1														
Acenaphthene	29,000	570	20				41,000	16,000				0.0077 U		NANA	NA	NA	NA.	NA NA	NA NA	NA NA
Acenaphthylene	190 (b)	84 (6)		3900 (b)					i desi			0.014	0.024	NA	NA	NA .	NA NA	NA .	NA .	NA -
Anthracene Benzo(a)anthracene	100,000	12,000 2					2.7	90,000 21	 590	-		0.014 0.1	0.045 0.19	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	0.21	8		125		*-	0.27	2,1	59	MO BERTHANNES IN THE ST	Television State Company	0.19	0.32	NA NA	NA	NA.	NA	NA	NA	NA
Benzo(b)fluoranthene	2,1	5										0.2	0.3	NA	NA NA	NA.	NA S	NA .	NA.	NA NA
Benzo(g,h,i)perylene Benzo(k)fiuoranthene	190 (b)	84 (b) 49	10 (b)	3900 (b)			27	210	5900			0.24 0.14	0.26 0.25	NA NA	NA NA	NA NA	NA NA	NA NA	NA =	NA NA
Chrysene	210	160					270	2100	59,000			0.18	0.29	NA	NA NA	NA	NA NA	NA	NA AN	NA NA
Diberiz(a;h)anthracene	0.21	2 .					0.27	2,1	59	5 7 F ()		0.033	0.052	NA	NA		. NA		NA	NA NA
luoranthene	22,000	4300	1875 986 188				29,000	8900		-		0.33	0.6	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA
Fluorene ndeno(1,2,3-cd)pyrene	26,000 2,1	560 14			30		35,000 2.7	12,000 21	590			0.0077 U 0.21	0.0075 U 0.27	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	190	84	10	3900			770	710	20,000		15	0.0077 U	0.0075 ∪	NA.	NA NA	NA.	NA .	NA	NA	NA
Phenanthrene	190 (b)	84 (b)								CONSTRUCTION SANCTION		0.12	0.18	NA	NA	NA	NA	NA NA	NA	NA
were	29,000	4200					21,000	6/00		J		0.34	0.53	NA.	NA	NA.	NA.	NA	NA	NA NA
ا CHLORINATED PHENOLS (mg/kg	1)								ŀ											
Method 8040/8270SIM																				
Pentachlorophenol	9.0	0.03	3	30	- 4				-			0.0072 U	0.0056 J	NA	NA	NA	NA	NA	NA	NA
F		l	I			1	l		I		ı 1									

Page 2 of 12

### TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

													0-0.5	0-0,5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
							SCREENING C	RITERIA													
									Risk-	Based Concer					COMP	COMP	COMP	COMP	COMP	COMP	COMP
Sample Identification:								Cail tagastics F	Dermal Contact	and labalation	Volatilization to Outdoor Air	Leaching to Groundwater	LW4D (0-0.5)	LW6D (0-0.5)	G2 (0-0.5)	G3 (0-0.5)	G8 (0-0.5)	G9 (0-0.5)	G12 (0-0.5)	G13 (0-0.5)	G14 (0-0.5)
Laboratory Identification:	FPA Regio	on 9 PRGs		Oregon	SIVs		Background	Soil ingestion, L	Construction	Excavation	Ogrador Mir	Groundwater	R950A	R950I	0108151-01	0108151-09	0108151-13	0108189-08	0108151-18	0108172-01	0108172-05
Date Collected:	Industrial	DAF=20	Plants	Mammals		Inverts	Buonground	Occupational	Worker	Worker	Occupational	Occupational		03/13/97	8/20/2001	8/20/2001	8/20/2001	8/24/2001	8/20/2001	8/21/2001	8/21/2001
VOLATILES (mg/kg)					•		ĺ					1									
EPA Method SW8260																					
1,2,4-Trimethylbenzene	170			3300 (f)			-	1500	1400	40,000	790	55	NA	NA	0.002 U	0.001 U	0.001 U				
1,2-Bibromoethane	0.073	- minus						0.083	0.25	7.1	17	0.000059	NA NA	NA	0.001.U	0.001.U					
1,3,5-Trimethylbenzene	70			3300 (f)	 Bridgersweige	introle-sign sichlich	 	1500	1400	40,000	 \$2062/06/88/87, 08/87, 08/8/82	12	NA	NA	0.002 U	0.001 U	0.001 U				
2-Butanone 4-Isopropyltoluene	110,000 520 (a)	12 (a)	200 (a)	1440 (a)							T Me		NA NA	NA NA	0.005 U 0.002 U	0.005 U 0.001 U	0.005 U 0.001 U				
Acetone	54.000	12 (8)	200 (a)				AF CRIME				67.76 EB 184 B		NA.	NA.	0.002 U	0.005 U					
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	NA	NA	0.001 U	0.001 U	0.001 U				
Carbon Discillide	720	32	2.00							<b>新文研算</b>		14-14-1	NA.		0.001 U						
Ethylbenzene	400	13	000000000000000000000000000000000000000	3300 (f)	APPRICATION AND			74,000	28,000			-	NA	NA	0.001 U	0.00129	0.001 U		0.001 U		
Isopropylbenzene	2000	040 (-)		3300 (f)	No. of Concession, Name of Street, or other party of the Concession, Name of Street, or other pa			51,000	24.000				NA NA	NA.	0.001 U 0.002 U	0.001 U 0.00388	0, <b>001</b> . U 0,002 U		0.001 U 0.002 U		
m.p-Xylene Methyl lodide	420 (g)	210 (g)		_	-		-	24,000 (g)	19,000 (g)				NA NA	NA NA	0.002 U	0.00388 0.001-U	0.002 U 0.001 U				A STATE OF THE PARTY OF THE PAR
Methyl tert-butyl ether	70	-		-	-			760	9000	**	720	0.30	NA.	NA.	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA
Naphthalene	190	- 84	10	3900				770	710	20,000		. 15	NA (	NA NA	0.020 U	0.010 U	0.010.0	0.010 U	0.010.U	0:010 U	0.010 U
n-Butylbenzene	240			3300 (f)					***				NA	NA	0.004 U	0.002 U	0.002 U		0.002 U	0.002 U	
n-Propylbenzene	240			3300 (f)		. **		19,000	9300				NA:		0.002 U	0.001 ⊎	0,001 U				
o-Xylene	420 (g) <b>220</b>	210 (g)	1			-		24,000 (g)	19,000 (g)			100 (g)	NA	NA	0.001 U 0.002 U	0.00221 0.001 U	0.001 U 0.001 U		0.001 U = 0.001 U	0.001 U	0.001 U 0.001 U
sec-Butylbenzene tert-Butylbenzene	390			3300 (f) 3300 (f)									NA NA	NA NA	0.002 U	0.001 U	0.001 U		0.001 U	0.001 U	
Toluene		12	200					58,000	39,000			180	NA.	NA.	0.00164	0.00521	0.002				
		The Control of the Co		POPULARISMAN PARACOPALICA	Ben Taraban Herri Justinia	MANAGEM LESS	CHANGE CONTRACTOR		MD 12, 12, 10, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12	27.23-1.24-1.44-1.4	SER CONTRACTOR CONTRACTOR		9-229-0-39-42			AV SERVICE OF SERVICE SERVICES	0.79			2014 MAIN PER MEN C. 27313	3 70745 14 2007 1 44 94 1
HYDROCARBONS (mg/kg)																					
NWTPH-HCID			ŀ																		
Gasoline								22,000	13,000		80,000	110	NA	NA	21.1 U	21.1 U	21.1 U		21.1 U	21.1 U	
Kerosene					F # F								NA	A	52.6 U	52.6 U	-52.6-U				
Diesel Lube Oil								70,000	23,000				NA NA	NA NA	Diesel Lube Oil	Diesel 105 U	Diesel 105 U	Diesel 108-Ü	Diesel 105 U	Diesel Lube Oil	53.8 U 108 U
Lube Oil				-									NA J	IVA	Lube On	105 C	105 0	108-0	100 0	Lube On	108 U
NWTPH-Dx (mg/kg)																					
TPH-Diesel Range								70,000	23,000	-			5.9 U NA		438 NA	430	253 NA	89.2 NA	154 NA	183	NA NA
TPH-Kerosene Range TPH-Motor Oil Range													NA NA	NA NA	. INA 308	NA 164	142	102	89.6	NA 396	NA NA
-			-	-	-					-			ING	NA.	300	104	142	102	65.0	390	ING.
NWTPH-G (mg/kg)						i															
TPH-Gasoline Range					-	- [		22,000	13,000		80,000	110	5.0 U	5.0 U	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																					
METALS (mg/kg)																					
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i)	60 (i)	5 (j)				<u> </u>		NA	NA	2.53 J	2.09	2.19	2.07	15.2	5.96	2.48
Chromium (6010)	450	- 38				.4 (b)(k)	23.1						NA.	NA -	12,6	22.0		17.4	40,0	19,4	24.2
Copper (6010)	41,000		100	390	190	50	19.1						NA VNA	NA NA	10.9 56.0	22.4 39.5	18.0 62.8	22.4 J	246 72.7	54.2 52.9	22.9
Lead (7421) Nickel (6010)	800 20,000	130	50 30	4000 625	16 320	500 200	9 21.4	750	750	750	100	30	NA NA	NA #	11.0	18.9	14.6	13.6 J 17.0	88.0	19.3	21.1
Nickei (6010) Zing (6010):	100,000	12,000	30 50 (h)	20,000	60 (h)	200	60.2			continuous sold total a			NA NA	NA:	65.0	77.7	71.2	57.0	162	102	91.9
CONTRACTOR OF THE CONTRACTOR O	San Comment with the comment						N. W.	20100					1000								4
Cadmium (6010)	450	8	4	125	6	20							NA	NA	NA	NA NA	NA NA	NA NA	NANA	NA	NA
Mercury (7471)	310		0.3	73	1.5	0.1							NA	NA.	NA.	= NA	NA	- NA	NA	NA	NA =
1		١				I	ŀ			- 1	I	I									

## TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

													0-0.5	0-0.5	0-0.5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
							SCREENING C	RITERIA													
									Risk-	Based Concer					COMP	COMP	COMP	COMP	COMP	COMP	COMP
											Volatilization to		İ								
Sample Identification:								Soil Ingestion, D			Outdoor Air	Groundwater	LW4D (0-0.5)	LW6D (0-0.5)	G2 (0-0.5)	G3 (0-0.5)	G8 (0-0.5)	G9 (0-0.5)	G12 (0-0.5)	G13 (0-0.5)	G14 (0-0.5)
Laboratory Identification:	EPA Region			Oregon 5			Background		Construction	Excavation		l	R950A	R950i	0108151-01	0108151-09	0108151-13	0108189-08	0108151-18	0108172-01	0108172-05
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	inverts		Occupational	Worker	Worker	Occupational	Occupational	03/12/97	03/13/97	8/20/2001	8/20/2001	8/20/2001	8/24/2001	8/20/2001	8/21/2001	8/21/2001
BETX (mg/kg)																					
EPA Method SW8021B																					
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	0.061 l	J 0.058 U	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13		3300 (f)				74,000	28,000		4		0.061-1	J 0.058 U	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	520	12	200	1440				68,000	39,000			180	0.061 t	J 0.058 U	NA.	NA	NA	NA	NA	NA	NA NA
Xylenes, Total	420	210				11. IV		24,000	19,000			100	NA NA	NA	NA NA	NA:	NA	NA.	NA.	· NA	NA.
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)				0.061 U	J 0.058 U	NA	NA	NANA	NA	NA	NA.	NA NA
o-Xylene	420 (g)	210 (g)					-	24,000 (g)	19,000 (g)			100 (g)	0.061 (	J - 0.058 U	NA.	· NA	NA	'NA	NA .	'NA	NA NA
DIOXINS AND FURANS (ng/kg)																					
Total TEQ						-							NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 3 of 12

TABLE C-1a Page 4 of 12

#### SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

											0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	1-1.5	1-1.5	1-1.5
					SCREENING	CRITERIA											1		
							Ris	k-Based Conce		T	COMP			COMP	COMP		COMP	COMP	COMP
Sample Identification:						Soil Ingestion	n, Dermal Conta	ct, and Inhalatio	Volatilization to n Outdoor Air	Leaching to Groundwater	G16 (0-0.5)	G16-GRAB	BA1 (0-0.5)	BA12 (0-0.5)	BA16 (0-0.5)	BA17 (0-0.5)	G2 (1-1.5)	G3 (1-1.5)	G8 (1-1.5)
Laboratory Identification:	EPA Region 9 PRGs			on SLVs	Background		Constructio				0108172-09	0108172-13	0108172-32	0108151-05	0108172-25	0106182-19	0108151-02	0108151-10	0108151-14
Date Collected:	Industrial DAF=20	Pla	ants Mamma	s Birds Inve	rts	Occupation	al Worker	Worker	Occupational	Occupational	8/21/2001	8/21/2001	8/22/2001	8/20/2001	8/22/2001	8/23/2001	8/20/2001	8/20/2001	8/20/2001
SEMIVOLATILES (mg/kg) EPA Method SW8270																			
2.6-Dinitrotoluene	620 0.0007	200	00 (a) 1440 (a							-	0.330 L	J NA	0.330 U	0.330 U					
2-Methylnaphthalene	190 (b) 84 (b)		<b>0 (b)</b> 3900 (b								0.067: U						0.067 U		
Acenaphthene	29000 570		20			41,000	16,000				0.067 L		0.067 L				0.067 U	0.067 U	0.067 U
Accnaphthylene Anthracene	190 (b) 84 (b) 100.000 <b>12.000</b>	-	<b>0 (b)</b> 2900 (b		**		90,000				0.120 0.120 J	NA NA	0.067 U 0.067 U			0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U
Benzo(a)anthracene	21 2					2.7	21	590_			0.690 J						0.067 U	0.067-U	
Benzo(a)pyrene	0.21 8		- 125			0.27	2.1	59			1,200	NA	0.067 U	0.067 U		0.067 U	0.067 ∪	0.067 U	0.067 U
Benzo(b)fluoranthene Benzo(g,h,i)perviene	2.1 5 190 (b) 84 (b)	10	o (b) 3900 (b)								2,100 J 1,400	NA NA	0.067 U 0.067 U			0.094 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U
Benzo(k)fluoranthene	21 49		) (b) 0300 (b)		and the second second second second	27	210	5900	70.00-50	100000	0.710	NA NA				0.087 U	0.067 U	0.067 U	0.067 U
bis(2-Ethylhexyl)phthalate	120 3600 (c)		1020	4.5	-				-		0.072	NA	0.085	0.130	0.120	0.086	0.067 U	0.067 U	0.067 U
Butylbenzyiphthalate Carbazole	100,000 930 86 0.6		~ 1020 (d)	4,5 (d) +			2 5 N-6				0.067 U 0.067 U		9.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.067 U	0.067.U 0.067.U	0.067 U 0.067 U
Chrysene:	210 160	_				270	2100	59,000			0.850		0.067 U				0.067 U		0.067 U
Dibenz(a,h)anthracene	0.21 2					0.27	2.1	59		-	0.074	NA NA	0.067 U				0.067 U	0.067 U	0.067 U
Dibenzofuran Diethylphthalate	1600 100,000 3600 (c)	200	0.002 0 (e) 30,000 (d	) 0.45 (e)							0.067 U 0.067 U	NA NA	0.067 U 0.067 U	0.067 U 0.067 U			0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U
Dimethylphthalate	100,000 3600 (c)		0 (e) 30,000 (e						e de la company		0.067 U						0.067 U	0.067 U	0.067 U
Di-n-Butylphthalate	62,000 2300	20	200 30,000	0.45					**		0.067 U	NA	0.067 U	0.067 U					
Di n-Octyl phthalate	25,000 10,000	200	0 (e) = 30,000 (e			00.000					0.067 LI						0.067 U		0.967 U
Fluoranthene Fluorene	22,000 <b>4300</b> 26,000 560			30		29,000	8900 12,000 =				1.900 J 0.067 U	NA NA	0.067 U 0.067 U		1.200 J 0.067 U	0.067 U 0.067 U	0.067 U	0.067 U	0.067 U 0.067 U
Hexachloroethane	120 0.5	- 18 AMERICA	CONTRACTOR OF SERVICE					-			0.130 U	NA.	0.130 U	0.130 U		0.130 U	0.130 U	0.130 U	0.130 U
Indeno(1;2;3-cd)pyrene	2.1 14					2.7	21	590			0.980	NA.	0.067 U			0.067 U	0.067 U		0.067 U
Naphthalene Pentachlorophenel	190 84 0.0 <b>0.03</b>	-	10 3900 3 30	4		770	710	20,000		15	0.067 U 0.330 U		0.130 U 0.330 U	0.130 U 0.330 U		0.130 U 0.330 U	0.067 U	0.067 U -0.330 U	0.067 U 0.330 U
Phenanthrene	190 (b) 84 (b)	-				-					0.680 J	NA	0.067 U	0.067 U		0.067 U	0.067 U	0.067 U	0.067 U
Pyrene : X-	29,000 <b>4200</b>					21,000	6700				2.000 J	NA.	0.067-U	0.067 U	1.200 J	0.067 U	0.067 U	0.067 U	0.067 U
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270SIM									]										
Acenaphthene	29,000 570		20			41,000	16,000				NA NA	NANA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
Acenaphinylene Anthracene	190 (b) 84 (b) 100,000 <b>12,000</b>	10	( <b>b)</b> 3900 (b)		-		90.000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	2.1 2				and the second s	27	21	590				NA NA		NA NA	NA NA		NA NA	NA.	, NA
Benzo(a)pyrene	0.21 8	1	125		CONTRACTOR ACTION CONTRACTOR	0.27	2.1	59	-		NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Benze(b)fluoranthere	2.1 5	10	(L) 0000 (L)	-	400 840				-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b) 84 (b) 21 49		(b) 3900 (b)		_	27	210	5900	-		NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	210 <b>160</b>	-				270	2100	59,000			NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	0.21 2.					0.27	2.1	59			NA.	NA.	NA	NA .	NA NA	NA	NA NA	NA	NA
Fluoranthene Fluorene	22,000 <b>4300</b> 26,000 560			30		29,000 35.000	8900 12,000		-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene	2.1 14		en en en en en en en en en en en en en e			2.7	21	590			NA	NA	NA.	NA	NA	NA	NA	NA	NA
Naphthalene	190 84		0 3900			770	710	20,000		4 15 15	NA.	NA.	NA NA	= NA	NA	NA.	NA S	NA I	NA
Phenanthrene	190 (b) <b>84 (b)</b> 29,000 <b>4200</b>	-			_						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	29,000 4200		*			21,000	6709				AM	, NA	AVI			S DAS	NA.	NA	NA.
CHLORINATED PHENOLS (mg/kg	1)	1																	
Method 8040/8270SIM		1.									N.I.E.			NI.	AL A			N. 4	N.A.
Pentachlorophenol	9.0 0.03	3	3 30	4	1				-		NA	NA	NA	NA	NA	NA	NA	NA	NA
									•	, ,							•		

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### SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

TABLE C-1a

Page 5 of 12

											0-0.5	0-0.5	0-0.5	0-0,5	0-0.5	0-0.5	1-1.5	1-1.5	1-1.5
	Г		-		SCREENING O	CRITERIA									-				
					1		Risk	-Based Conce	ntrations		COMP			COMP	COMP		COMP	COMP	COMP
		l			1				Volatilization to										
Sample Identification: Laboratory Identification:	EPA Region 9 PRGs		Oregon	CI Vo	Background	Soil Ingestion, E	Construction	t, and Inhalation Excavation	Outdoor Air	Groundwater	G16 (0-0.5) 0108172-09	G16-GRAB 0108172-13	BA1 (0-0.5) 0108172-32	BA12 (0-0.5) 0108151-05	BA16 (0-0.5) 0108172-25	BA17 (0-0.5) 0108182-19	G2 (1-1.5) 0108151-02	G3 (1-1.5) 0108151-10	G8 (1-1.5) 0108151-14
Date Collected:	Industrial DAF=20	Piants				Occupational	Worker	Worker	Occupational	Occupational	8/21/2001	8/21/2001	8/22/2001	8/20/2001	8/22/2001	8/23/2001	8/20/2001	8/20/2001	8/20/2001
		1			1	1			1	1							1		
VOLATILES (mg/kg) EPA Method SW8260		İ																	
1,2,4-Trimethylbenzene	170		3300 (f)			1500	1400	40,000	790	55	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane	0.073					0.033	0.25	7.1	10 H 7 W	0.000059	0.001 U		0.001 U				0.001 U	0 001 U	
1,3,5-Trimethylbenzene	70		3300 (f)			1500	1400	40,000	-	12	0.001 U	NA	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U
2-Butanone	110,000	46.00								A December	0.005 U			0 005 U			0.005.∪		
4-Isopropyltoluene	520 (a) 12 (a)	200 (a)	1440 (a)				-		-		0.001 U	NA .	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U
Acetone Benzene	54,000 <b>16</b> 1.4 0.03		3300			34	340	9400	48	0.052	0.005 U 0.001 U	NA NA	0.050 U 0.001 U	0.005 U 0.001 U		0.005.U 0.001 U	0.005 U 0.001 U	0.00712 0.001 U	0.005 U 0.001 U
Carbon Disulfide	720 32					34	340	5400	40	0.052	0.001 U	NA NA	-0.001 U				0.001 U		0.001 U
Ethylbenzene	400 13	WEST LANDS	3300 (f)			74,000	28,000				0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropylbenzene	2000		3300 (f)			51,000	24,000				0.001 U	NA NA	0.001 U				0.001 U	0.001 U	0.001 U
m,p-Xylene	420 (g) 210 (g)					24,000 (g)	19,000 (g)				0.002 U	NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00232	0.002 U
Methyl fodide	15 S 1 S 1 S 1 S 1 S 1 S 1 S 1 S 1 S 1 S										0.001 U	NA.	0.001 U				0.001 U	0.001 U	0.001 U
Methyl tert-butyl ether Naphthelene	70 190	10	9900			760 770	9000 <b>710</b>	20,000	720	0.30 15	NA 0.010 U	NA NA	NA 0.010 U	NA 0.010 U	NA 0,010 U	NA 0.010 U	NA 0.010 U	NA 0.010 U	NA 0.010 U
n-Butylbenzene	240	10	3300 (f)				/10	20,000			0.002 U	NA NA	0.002 U	0.002 U	0.000 ∪	0.002 U	0.002 ∪	0.002 U	0.002 U
n=Propylbenzene	240		3300 (f)			19,000	9300				0.001 U	NA.	0.001 U				0.001 U	0.001 U	0.001 U
o-Xylene	420 (g) 210 (g)	1				24,000 (g)	19,000 (g)			100 (g)	0.001 U	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
sec-Butylbenzene	. 220	W.	3300 (f)								0.001 U	NA.	0.001 U				0,001 U	0.001 U	0,001_U
tert-Butyfbenzene	390	AUSBRICHMSKE (de	3300 (f)		-				AND THE REST AND T		0.001 U	NA NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Foluene	520 12	200	1440	Variation in the		68,000	39,000	all carries		180	0.001 U	NA	0:001.U	- 0.00102	0.001.10	0.00146	0.001 U	.0.00183	0.00105
HYDROCARBONS (mg/kg)	İ																		
, 1																			
NWTPH-HCID																			
Gasoline Kerosene					-	22,000	13,000		80,000	110	21.5 U 53.8 U	21.7 U 54.3 U		21.3 U 53.2 U	23.0 U 57.5 U	21.3 U 53.2 U	21.7 U 54,3 U	22.0 U 54.9 U	22.2 U 55.6 U
Diesel						70,000	23.000				53.8 U	54.3 U		Diesel	57.5 U	Diesel	Diesel	Diesel	Diesel
Lube Oil										4 1 4 1 1	108 U	Lube Oil	122 U	Lube Oil	Lube Oil	106 🍱	0.109 U	Lube Oli	Lube Oil
MACON CO. (co. (l. )	\$1,198 x 190 x 190 x 190 x 17 x 10 x 17 x 10 x 17 x 10 x 17 x 10 x 17 x 10 x 17 x 10 x 10					E20-4-208-4-235-7-10-2 88-7075	3000, 30000 0000, 00000												
NWTPH-Dx (mg/kg) TPH-Diesel Range					1	70.000	23,000				NA NA	34.2	NA	526	17.2 U	169	133	396	261
TPH-Kerosene Range						10,000	23,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
TPH-Motor Oil Range				-							NA	133	NA	164	158	104	54.4 U	167	139
NIMTON C (marks)																			
NWTPH-G (mg/kg) TPH-Gasoline Range						22,000	13,000		80.000	110	NA	NA	NA	NA	NA	NA	NA.	NA	NA
11 11 casonie range						22,000	10,000		00,000	,,,,			10.						1471
PRIORITY POLLUTANT					1												]		
METALS (mg/kg)										i							i		
Arsenic (7060)	1.6 (h) 29	10 (i)	29 (i)	10 (i) 60 (i)	5 (j)					g - 6-20	3.43	89.1	4.62	3.49	29.6	1.96	2.25	2.43	1.86
Chromium (6010)	450 38		340,000 (k)								19.3 17.5	81.9 82.2	17,3 14.5	16.5 17.7	38.0 54.6	17.6 16.0	15.1 12.8	14.7 12.8	14,9 13.5
Copper (6010) Lead (7421)	41,000	100 50	390 4000	190 <b>50</b>	19.1	750	750	750		30	17.5	37.3	14.5 16	18.0	127	51.1	17.9	9.13	13.5 8.63
Nickel (6010)	20,000 130	30	625	320 200	21.4				-		18.9	98.6	15.2	17.6	42.6	18.5	16.1	16.2	17.4
Zinc (6010)	100,000 12,000	50 (h)		60 (h) 200	60.2						67.7	152	107	68.4	1150	66.9	47.6	47.8	68.5
Cadmium (6010)	450 8	4	125	6 20							NA	1.25	NA NA	NA	NA	NA	NA NA	NA	NA
Mercury (7471)	310	0.3	Z9	1.5 0.1							NA	0.0222	NA NA	NA	NA NA	NA	NA NA	NA .	NA.
I	1				ı l			i											

Landau Associates 7/19/05 \\Edmdata\wproc\231\009\132\Phill RI 071905\Phill RI Rpt, App C MTF 0-3

#### TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

0-0.5 0-0.5 0-0.5 0-0.5 0-0.5 1-1:5 1-1.5 1-1.5 SCREENING CRITERIA Risk-Based Concentrations COMP COMP COMP COMP COMP COMP Leaching to Volatilization to Sample Identification: Soil Ingestion, Dermal Contact, and Inhalation Outdoor Air Groundwater G16 (0-0.5) G16-GRAB BA1 (0-0.5) BA12 (0-0.5) BA16 (0-0.5) BA17 (0-0.5) G2 (1-1.5) G3 (1-1.5) G8 (1-1.5) EPA Region 9 PRGs Laboratory Identification: Oregon SLVs Background Construction Excavation 0108172-09 0108172-13 0108172-32 0108151-05 0108172-25 0108182-19 0108151-02 0108151-10 0108151-14 Date Collected: Industrial DAF=20 Plants Mammals Birds Inverts Occupational 8/21/2001 Worker Worker 8/21/2001 8/22/2001 8/20/2001 8/20/2001 BETX (mg/kg) EPA Method SW8021B NA NA 0.03 3300 9400 0.052 NA Benzene NA NA NA NA 3900 (1) Efflylbenzene. 400 = 13 74,000 28,000 NA. NA I NA NA NA NA NA Toluene 520 200 1440 68,000 39,000 180 NA NA NA NA NA NA NA NA NA 24,000 19,000 NA. NA NA NA NA NA NA NA NA NA. -NA 420 (g) 24,000 (g) m,p-Xylene 210 (g) 19,000 (g) NA NA NA NA NA NA o-Xylene 420 (g) 210 (g) 24,000 (g) 19,000 (g) 100 (g) NA NA NA \_NA NA. DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA NA NA NA NA

Page 6 of 12

TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

Page 7 of 12

										1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1,5	1-1.5	1-1.5	1-1.5
				SCREENING (	CRITERIA					<b> </b>								
						Risi	k-Based Conce			COMP	COMP	COMP	COMP	COMP	COMP		COMP	
		-		i				Volatilization to			G30 (1-1.5)							
Sample Identification: Laboratory Identification:	EPA Region 9 PRGs		Oregon SLVs	Background	Soil Ingestion,	Dermal Contaction		Outdoor Air	Groundwater	G9 (1-1.5) 0108189-09	Dup of G9 (1-1.5) 0108189-07	G12 (1-1.5) 0108151-19	G13 (1-1.5) 0108172-02	G14 (1-1.5) 0108172-06	G16 (1-1.5) 0108172-10	BA1 (1-1.5) 0108172-33	BA12 (1-1.5) 0108151-06	BA15 (1-1.5) 0108172-22
Date Collected:	Industrial DAF=20	Plants			Occupationa		Worker	Occupational	Occupational		8/24/2001	8/20/2001	8/21/2001	8/21/2001	8/21/2001	8/22/2001	8/20/2001	8/22/2001
SEMIVOLATILES (mg/kg)				1		-												
EPA Method SW8270		1		1	1			1	1	i								
2,6-Dinitrotoluene	620 <b>0.0007</b>	200 (a	) 1440 (a)		-				_	0.330 L	0.330 U	0.330 U	0.330 U	0.330 し	0.330 U	0.330 l	J 0.330 U	0.330 U
2 Methylnaphthalene	190 (b) 84 (b)	10 (b)		naara 1		15,00	0.10 (6.40)	4		0.067 (	0.067 U=	0.067 U	0.067 U	0.067 L	J 0.067 U	0.067 (	0.400	0.067 ∪ =
Acenaphthene	29000 570	20	-		41,000	16,000				0.067 U		0.067 U	0.067 U			0.067 U		0.067 U
Acenaphibylene	190 (b) 84 (b)	10 (b)		Tokat.						0.067 U		0.067 U	0.067 U					
Anthracene Benzo(a)anthracene	100,000 <b>12,000</b> 2.1 <b>2</b>			-	2.7	90,000 21	590	-	-	0.067 U		0.067 U 0.085	0.067 U 0.067 U			0.067 U		0.067 U 0.099 J
Benzo(a)pyrene	0.21 8		125		0.27	2.1	59	-	-	0.067 U		0.120	0.067 U			0.067 L		0.150
Benzo(b)fluoranthene	2.1 5									0.067 L		0.100	0.067 U					0.250 J
Benzo(g,h,i)perylene	190 (b) 84 (b)	10 (b)	3900 (b)						-	0.067 U		0.067 U	0.067 U			0.067 L		0.170
Benzo(k)fluoranthene	21 49				27	210	5900			0.067 U		0.067 U				0.067 (		0.082
bis(2-Ethylhexyl)phthalate	120 3600 (c) 100,000 930	Cos (S.) Mario (Signal)	1020 <b>4.5</b>	-						0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.067 U			0.067 t 0.067 t		0.067 U C.067 U
Butylbenzylphthalate Carbazole	86 <b>0.6</b>		1020 (d) 4.5 (d)							0.067 U		0.067 U	0.067 ∪	0.067 U		0.067 (		0.067 U
Chrysene	210 160	alui e			270	2100	- 59,000			0.067 U		0.067 U	0.067 U			0.067 U		0.120 J
Dibenz(a,h)anthracene	0.21 2				0.27	2.1	59			0.067 U		0.067 U	0.067 U			0.067 L		0.067 U
Dibenzofuran	1600	<b>B</b> EALE	0.002						81/80 44 30	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 L		0.067 U
Diethylphthalate	100,000 3600 (c)		30,000 (e) 0.45 (e)							0.067 U		0.067 U	0.067 U	0.075	0.067 U	0.067 L		0.067 ∪
Dirruethylptithalate	100 000 3600 (c)		30,000 (e) 0.45 (e)							0.067 U		0.067 U				0.067 L		0.067 U
Di-n-Butylphthalate Di-n-Octylphthalate	62,000 2300 25,000 10,000	200	30,000 <b>0.45</b> 30,000 (e) <b>0.45 (e)</b>	0.00						0.067 U 0.062 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		0.067 L		0.067 U 0.067 U
Fluoranthene	22,000 4300	- ZWJ.E	30 000 (e) 0.43 (e)		29,000	8900				0.067 U		0.210	0.067 U			0.067 L		0.320 J
Fluorene	26,000 560		30		35,000	12,000				0.067 U		0.240	0.067 U			0.067 L		0.067 U
Hexachloroethane	120 <b>0.5</b>			-	-	-	**			0.130 U	0.130 U	0.130 U	0.130 U	0.130 U		0.130 L		0.130 U
Indeno(1,2,3-cd)pyrene	2.1 14				2.7	21	590			0.067. U		0.067 U	0.067 LJ			0.067 L		0.110
Naphthalene Pentachlorophenol	190 84 9.0 <b>0.03</b>	10	3900 <b>4</b>	-	770	710	20,000		15	0.067 U 0.330 L		0.067 U 6.330 U	0.067 U = 0.330 U	0.067 U -0.330 U		0.130 U 0.330-U		0.130 U = 0.330 U
Phenanthrene	190 (b) 84 (b)	高沙沙沙海	- 4	-			-	-		0.067 1		0.510	0.067 U	0.067 11		0.067 L		0.180 J
Pyrene	29.000 4200				21,000	8700				0.067 U		0.200	0.057 U			0.057 L		
		and the second																
SEMIVOLATILES (mg/kg)		ĺ																
EPA Method SW8270SIM Acenaphthene	29.000 570	20			41,000	16,000				NA.	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	190 (b) 84 (b)		3900 (b)	A BUREL	41,000	16,000	05050000			NA NA	NA NA	NA.	NA I	NA NA	NA I	NA NA	INA INA	NA.
Anthracene	100,000 12,000					90,000			**	NA NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	21. 2			281 - 10 21 - 12 2 - 12 2 2 2 2 2 2 2 2 2 2 2 2	2:7	. 21	590			NA:	NA.	NA	NA .	NA	NA.	NA NA	NA I	NA NA
Benzo(a)pyrene	0.21 8		125		0.27	2.1	59		- And Telephone - Inc.	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b) fluoranthene	2:1 5		0000 #1			100 CH 100				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA.
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b) 84 (b)	10 (b)	3900 (b)		27	210	5900			NA NA	NA NA	NA NA	NA NA			NA NA	NA NA	NA NA
Chrysene	210 160				270	2100	59,000	towerower me		NA.	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene	0.21 2			200	0.27	21		18151144		. NA	NA NA	NA	. NA.				NA.	NA NA
Fluoranthene	22,000 4300				29,000	8900	-			NA	NA	NA	NA	NA	NA NA	NA	NA	NA NA
Huorene	26,000				35,000	12,000				NA .	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA	
Indeno(1,2,3-cd)pyrene	2.1 14				2.7	21	590		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene Phenanthrene	190 84 190 (b) 84 (b)	200	3900	-	770	- 710 	20,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	29,000 4200	.1.			21,000	6700				NA NA	NA NA	NA NA	NA.	NA NA	NA.	NA -	NA NA	ACTUAL CONTRACTOR AND ADDRESS OF THE PARTY O
				24.4						AND DESCRIPTION OF THE PERSON						o sano Tenne Vende Telefortik	no i recoltrer l'imperit diffeti (12	NATIONAL PROPERTY OF STREET,
CHLORINATED PHENOLS (mg/kg	)			i I					<b> </b>									
Method 8040/8270SIM	0.0	1 ,								N14	214	\$1A	N/e	NA	<b>.</b>	NI.	114	810
Pentachlorophenol	9.0 0.03	3	30 4	"	-		- 1		- 1	NA	NA	NA	NA	NA	NA	NA	NA	NA
1		1		, ,			ŀ	ı										

7/19/05 \\Edmdata\wproc\231\009\132\Philli RI 071905\Philli RI Rpt\_App C MTF 0-3 Landau Associates TABLE C-1a

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

													1-1,5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	ii 1-1:5	1-1.5
							SCREENING C	RITERIA					ļ								
									Risk	-Based Concer			COMP	COMP	COMP	COMP	COMP	COMP		COMP	
	1							<b>.</b>			Volatilization to			G30 (1-1.5)							
Sample Identification: Laboratory Identification:	EPA Region 9 PF	no- 1	1	Oregon	CL V-		Background	Soil Ingestion, D	Dermal Contaction Construction	t, and Inhalation Excavation	Outdoor Air	Groundwater	G9 (1-1.5) 0108189-09	Dup of G9 (1-1.5) 0108189-07	G12 (1-1.5) 0108151-19	G13 (1-1.5)	G14 (1-1.5) 0108172-06	G16 (1-1.5) 0108172-10	BA1 (1-1.5) 0108172-33	BA12 (1-1.5)	BA15 (1-1.5)
Laboratory Identification: Date Collected:		=20	Plants	Mammals		Inverts	Background	Occupational	Worker	Worker	Occupational	Occupational	B/24/2001	8/24/2001	8/20/2001	0108172-02 8/21/2001	8/21/2001	8/21/2001	8/22/2001	0108151-06 8/20/2001	0108172-22 8/22/2001
	I I I I I I I I I I I I I I I I I I I	-2.0	T IGHIO		Dirigo	WIVEILG		Occupational	71 511(6)	***************************************	Companional	Cocapassiai	D.E. ((EDG)	0,21,2001	0,20,2001	G/LI/LDD1	U/E II E OCT	OL III	OZZZZOO1	0.20.2001	GIZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
VOLATILES (mg/kg) EPA Method SW8260																					
1,2,4-Trimethylbenzene	170 -			3300 (f)				1500	1400	40,000	790	55	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0901	0.001 U
1,2 Dibromoethane								0.033	0.25	7.1	1.7	0.000059	0.001 U		0.001 U	= 0.001 U					
1,3,5-Trimethylbenzene	70 -			3300 (f)				1500	1400	40,000		12	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
2 Butanche	110,000 -		7,			100							0.005 U	0.005 U	0.00596	0.005 U	0.0153 U	0:005 U	0:005 U	0,005 U	0.005 U
4-Isopropyltoluene		(a)	200 (a)	1440 (a)			- CONTRACTO CONTRACTO CONTRA	TEN ARCITUS - CERO - 4840 - 102					0.001 U		0.001 U	0.001 U	0.001_U	0.001 U	0.001 U		0.001 U
Acetone	54,0001		- T	1250									U 800 B		0.017	D 905 U		0.005 U			0.005_U
Benzene Carbon Disulfide	1.4 0.6 720 3			3300	~- *269%(155%)	 88831088885		34	340	9400	48	0.052	0.001 U	0.001 U 0.001 U	0.001 U 0:001 U	0.001 U 0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 ∪
Ethylbenzene		3		3300 (f)				74,000	28.000				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.00163	0.001 U 0.001 U
Isopropylbenzene		3		3300 (1)				51,000	24,000	 			0.001 U		0.001 U	0.001 U	0.001 U				0.001 U
m,p-Xylene	420 (g) 210		ARCHIOCOSTRA RESIN	**				24,000 (g)	19,000 (g)				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0234	0.002 U
Methyl lodide													0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Methyl tert-butyl ether	70							760	9000		720	0.30	NA.	NA	NA	NA	NA	NA	NA	NA	NA NA
Naphthalene	. 190 8	manufacture of the state of	Contraction of the contraction o	3900				770	710	20,000		15	6.010 U	0.010 U	U 010.0	0.010 U	0.010 U	0.010 U	0.010 U		0 010 U
n-Butylbenzene	240			3300 (f) 3300 (f)					0000				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U 0.001 U	0.002 U 0.001 U	0.002 U 0.001 U	0.00547	0.002 U 0.001
n-Propylbenzene o-Xylene	240 420 (g) 210		1	aguunt)				19,000 24,000 (g)	9300 19,000 (g)			100 (g)	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U	0.001 U	0.001 U	0.0124	0.001 U
sec-Buty benzene	220			3900 (f)				24,000 (g)			17.0	100 (g)	0.001 U		0.001 U	0.001 U	0.001 U				0.001 U
tert-Butylbenzene	390	-		3300 (f)						CANDEL N. 1885-107-107-10			0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	520 1;	2	200	1440			E 1871-T 15	68,000	39,000			180	≡ 🥼 oom u	0.001 U	0.001 U	0.000 U	- 0.001.U	0.001 U	0.001 U	0.00157	0.001 U
HYDROCARBONS (mg/kg)										}											
NWTPH-HCID																					
Gasoline		-	Aug Radical Science					22,000	13,000		80,000	110	22.0 U	22.0 U	22.0 U	20.8 U	22.0 U	21.5 U	24.4 U	22.2 U	21.5 U
Keroseno								70.000					54.9 U	54.9 U	54.9 U	52.1 U	54.9 U	53.8 U	61.0 U		53.8 U
Diesel Eube Oil								70,000	23,000				54.9 U 110 U	54.9 U 110 U	54.9 U	52.1 U 104 U	54.9 U	53.8 U 108 U	Diesel 122 U	Diesel 111 U	53.8 U 108 U
9.3 22 - 0.32 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0		and the same			5 5 - 1 M - 1 M - 1			310000000000000000000000000000000000000		County Sport Standard			TIVO	THU V	110-0	1040	110.0	150-0	1220		100 0
NWTPH-Dx (mg/kg)																					
TPH-Diesel Range								70,000	23,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	95 NA	1750 NA	NA NA
TPH-Korosene Range TPH-Motor Oil Range			-		-				TOTAL THE COM			COLUMN TO SERVICE SERV	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	69.6	85.1	NA NA
														14/1	1471	1471	1473	(0)	00.0	05.1	THE .
NWTPH-G (mg/kg)								00.000	40.000			440	NA	***		***		***			
TPH-Gasoline Range		١ ١						22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT										- 1											
METALS (mg/kg)						- 1				- 1	1	- 1									
Arsenic (7060)	1.6 (h) 29		10 (i)	29 (i)	10 (i)	60 (i)	5 (j)						2.28	2.40	2.14	2.03	1.82	2.72	2.38	2.20	2.97
Chromium (6010)	450 38		1 (h)(k) 3			).4 (h)(k)	23.1			and the same			15.2	16.3	14.8	13.7	18.8	16.3	15.6	14,7	14.6
Copper (6010)	41,000		100	390	190	50	19.1						13.5 J	<b>26.7</b> J	13.8	12.5	14.1	13.9	15.6	12.3	14.5
Lead (7421)	800		50	4000	16	500 200	9 21.4	750	750	750		30	5.19 J 16.1	10.4 J 17.3	10.1	1,96 U 16.6	1,96 U 19.4	3.82	44.3	3.75	8.96
Nickel (6010) Zinc (6010)	20,000 13 100,000 12,0		30 50 (h)	625	320 60 (h)	200	21.4 <b>60.2</b>						16.1 44.8	17.3 54.4	17.9 46.4	16.5 45,1	19.4 51.4	18.9	16.1	23.5 46.1	16.3 47.2
	TO THE OWNER OF THE OWNER OWNER OF THE OWNER OWNE		ENSAUTE T	-42,44	· se Aug								117.0	VA.7	TVAT	744	and the Marie	1502	1 20.0		77.2
Cadmium (6010)	450 8		4	125	6	20		**					NA	NA	NA	NA	NA.	NA	NA	NA	NA
Mercury (7471)	310		0.3	79	1.5	0.1				A STATE OF			NA	NA	NA	, NA	NA ,	NA .	NA :	- NA	. ANA

Page 8 of 12

Total TEQ

### TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

1-1.5 1-1.5 1-1.5 1-1.5 1-1.5 1-1.5 1-1.5 1-1.5 SCREENING CRITERIA Risk-Based Concentrations COMP COMP COMP COMP COMP COMP COMP G30 (1-1.5) Leaching to Volatilization to Sample Identification: Soil Ingestion, Dermal Contact, and Inhalation Outdoor Air Groundwater G9 (1-1.5) Dup of G9 (1-1.5) G12 (1-1.5) G13 (1-1.5) G14 (1-1.5) G16 (1-1.5) BA1 (1-1.5) BA12 (1-1.5) BA15 (1-1.5) tory Identification: EPA Region 9 PRGs Oregon SLVs

Date Collected: Industrial DAF=20 Plants Mammals Birds Laboratory Identification: Background Construction Excavation 0108189-09 0108189-07 0108151-19 0108172-02 0108172-06 0108172-10 0108172-33 0108151-06 0108172-22 Worker Worker 8/24/2001 BETX (mg/kg) EPA Method SW8021B 0.03 9400 Benzene 1.4 3300 340 48 0.052 NA NA NΑ Ethylbenzene 400 13 74,000 26,000 ---NA... NΑ NA ... 3300 (f) 200 520 12 1440 68,000 39,000 180 NA NA NA Toluene Xylenes, Total 24,000 19,000 - 24,000 (g) --100 NA NA NA. NA: 210 NA 420 (g) NA NA m.p-Xvlene 210 (g) NA NA o Xylene 420 (g) 210 (g) 100 (9) NA . NA NA DIOXINS AND FURANS (ng/kg)

NA

NA

NA

Page 9 of 12

NA

NA

NA

NA

TABLE C-1a Page 10 of 12

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

												1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1.1.5	1405	1-1.5
						SCREENING (	CRITERIA										-	**	
								Risk-	Based Concer				COMP						
0						İ	Calllananian	Dermal Contact		Volatilization to Outdoor Air	Leaching to Groundwater	BA18 (1-1.5)	DA46 (4.4.6)	DA17/4 4 E)	LIDOL (4.4.5)	UDoo (4.4.5)	LIDOC (4.4.5)	LIDOA (4.4.6)	LIDOS (4.4.)
Sample Identification: Laboratory Identification:	EPA Regi	nn 9 PRGs	1	Oregon S	SI Ve	Background	Soil ingestion, i	Construction	Excavation	Outdoor Air	Groundwater	Dup of BA15 (1-1.5) 0108172-19	BA16 (1-1.5) 0108172-26	BA17 (1-1.5) 0108182-20	HB01 (1-1.5) 0310117-02	HB02 (1-1.5) 0310117-07	HB03 (1-1.5) 0310117-21	HB04 (1-1.5) 0310117-16	HB05 (1-1.6 0310117-1
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inver		Occupational	Worker	Worker	Occupational	Occupational	8/22/2001	8/22/2001	8/23/2001	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
EMIVOLATILES (mg/kg) PA Method SW8270										·									
6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								0.330 U	0.330 U	0.330 U	NA	NA	NA	NA	N.A
Methylnaphthalene.	190 (b)	.84 (b)	10 (b)	3900 (b)			20022678					0.067-U		0.067 U	NA.	NA	NA.	NA.	N.
enaphthene	29000	570	20			-	41,000	16,000	-			0.067 U		0.067 U	NA	NA	NA	NA	N
enaphthylene	190 (b)	84 (b)	10 (b)	3900 (b)	- 177 in 144							0.067 U		0.067 U	. NA	NA .	NA	NA	, N
thracene	100,000	12,000						90,000				0.067 ∪		0.067 U	NA NA	NA	NA	NA_	N
nzo(a)antirracene nzo(a)pyrene	2.1 0.21	2 8		125			2.7 0.27		590 59			0.170 J 0.250	0.067 U 0.067 U	0.067 U 0.067 U	NA NA	NA NA	NA NA	NA NA	. N N
nzo(b)fluoranthenc	2.1	. II - 5 1 4 1 1		125			0.27	2.1	29			0.420 J				NA NA			N -
nzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)						_		0.290	0.067 U	0.067 U	NA	NA	NA	NA	N
nza(k)fluoranthene	21	49					27	210	5900			0.140	0.067 U	0.067 U	NA:		NA.	NA NA	
(2-Ethylhexyl)phthalate	120	3600 (c)	-	1020	4.5							0.067 U	0.067 U	0.067 U	NA NA	NA.	NA	NA NA	N.
lylbenzylphthalale	100,000	930		=1020 (d)	4.5 (d)							0.067-U		0.067 U	NA NA	- NA	NA ·	NA.	, N
rbazole	86	0.6										0.067 U	0.067 U	0.067 U	NA	NA	NA	NA	N.
rysene	210	1 <b>60</b>		***			270 0.27	2100	59,000 59			0.200 J 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	NA NA	NA NA	NA NA	,NA NA	N N
enz(a,h)anthracene enzotucan	0.21 1600			0.002			0.27	2.1	59			0.067 U		0:067 U	NA NA		NA NA	NA.	
ethylphthalate	100.000	3600 (c)		30,000 (e)								0.067 U	0.067 U	0.067 U	NA NA	NA	NA	NA NA	N.
nethylphinalate	100,000	3600 (c)			0.45 (e)							0.067 U		0.067 U	NA.	N/A	NA NA	NA	
n-Butylphthalate	62,000	2300	200	30,000	0.45							0.067 U	0.067 U	0.067 U	NA	NA	NA	NA	N
r-Octyl phthalate	25,000	10,000	200 (e)	30,000 (e)	0.45 (e) -			7.00				0.067 U		0.067 U	NA.	NA :	NA .	NA.	N,
oranthene	22,000	4300				-	29,000	8900				0.520 J	0.067 U	0.067 U	NA	NA	NA	NA	N/
orene	26,000	560			30		35,000	12,000				0.067 U	0.067 U	0.067 U	NA	NA -	NA .	NA NA	, N
xachlorcethane leno(1,2,3-cd)pyrene	120 <b>2.1</b>	0.5 14	-				27	21	590			0.130 U 0.200	0.130 U 0.067 U	0.130 U 0.067 U	NA NA	NA NA	NA NA	NA NA	N/
phthalene	190	84	10	3900			770	710	20,000		15	0.130 U	0.130 U	0.130 ∪	NA	NA NA	NA NA	NA NA	N/
ntachlorophenol = = = =	9.0	0.03	3		- 4							0.330 U	0.330 U	0.330 U	NA NA	NA.	NA NA	NA.	N/A
enanthrene	190 (b)	84 (b)						12831 471 ABUS 18021 A				0.220 J	0.067 U	0.067 U	NA	NA	NA	NA	N/
rene (	29,000	4200			Y= 4-7   15 v2		21,000	6/00				0.690 J	0.067 U	0.067 U	NA	NA	NA	NA	N/
MIVOLATILES (mg/kg)									İ										
enaphthene	29,000	570	20			l	41,000	16.000			]	NA	NA	NA	0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.00667
enaphthylene	190 (b)	84 (b)		3900 (b)								NA =	NA NA	NA NA	0.008	0.00667 U		0.00667 U	
hracene	100,000	12,000						90,000	**	-	]	NA	NA	NA	0.0133	0.00667 U	0.00667 U	0.00667 U	0.0073
nzo(a)anthracene	2.1	2					27	21	590			NA NA	NA	NA.	0.0247	0.00667 U	0.016	0.00667-U	
nzo(a)pyrene	0.21	8		125			0.27	2.1	59	 		NA	NA	NA	0.032	0.00667 U	0.00667 U	0.00667 U	0.0066
izo(b)fluoranthene	2.1	5.	40 (1)			and the second						NA NA	NA. NA	, NA NA	0.058 0.0327	0,00667 U 0,00667 U	0.00667 U 0.0113	0.00113 0.00667 U	0.0093
nzo(g,h,i)perylene nzo(k)fluoranthene	190 (b) 21	84 (b) 49	10 (b)	3900 (b)			27	210	5900			NA NA	NA NA	NA NA	0.0327	0.00667 U		0.00667 U	0.016
vsene	210	160					270	2100	59,000	-		NA NA	NA NA	NA	0.082	0.00667 U	0,00667 U	0.00667 U	0.0066
enz(a,h)anthracene	0,21	2		1917/05/2017			0.27	2.1	59			NA NA	NA.	NA NA	0.01	0.00667 U		0.00667.0	
ranthene	22,000	4300	Artings and distants	and the Barrier State of the St			29,000	8900				NA	NA	NA	0.0373	0.00667 U	0.00667 U	0.00667 U	0.014
rene	26,000	560			30		35,000	12,000			أستنسين	NA NA	NA NA	NA *	0.00733	- 0 00667 U	0.00667 U	0.00667 (	0.013
eno(1,2,3-cd)pyrene	2.1	14					2.7	21	590		]	NA	NA	NA	0.0227	0.00667 U	0.00667 U	0.00667 U	0.0066
onthalene	190	84	10	3900			770	710	20.000		15	NA NA	NA	NA NA	0.022	0.00667 U		0.00667 U	0.008
nanthrene	190 (b)	84 (b)		-						CHICAGONIANIA		NA .	NA	NA	0.0373	0.00667 U	0.008	0.00667 U	0.016
ene e	29,000	4200					21,000	6700	4			NA NA	= NA	. NA	0.052	0.00667 U	0.00607 U	0,006 <b>67</b> U	0.0066
, objeties briefler of									1		İ								
	1									ı									
ILORINATED PHENOLS (mg/kg) sthod 8040/8270SIM ntachlorophenol	9.0	0.03	3	30	4					_	i	NA	NA	NA	NA	NA	NA	NA	NΑ

7/19/05 WEdmidate\wyprod/231\009\132\Phill RI 071905\Phill RI Rpt\_App C MTF 0-3

# TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

Part   Part														191,5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5
Part	1							SCREENING C	RITERIA				-								
Supplication   Part										Risk-	Based Concen	trations		1	COMP						
Control   Cont								ļ													
Control   Cont									Soil Ingestion, D			Outdoor Air	Groundwater								
Color   Colo				Disaste			Laurente	Background													
## Process of Process	Date Collected:	Industrial	DAF=20	Plants	Mammais	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/22/2001	8/22/2001	8/23/2001	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
1-2-1				l									i								
The content of the				[																	
1-5.5 merupherweits 70 - \$30.0 (0 150				manufaction and name			CONTRACTOR	555(22-32-32-32-32-32-32-32-32-32-32-32-32-3													
Part   Part				married and a series		CEL CATTERN TRANS	Contract Contract	N 1111													
## Social 12 (a) 2010 12 (b) 16 (c)				SULL TOWNS DOWN				AND THE RESERVE TO SERVE					District Street Control of the Contr								
Property   Property			C. The second second	THE PARTY OF THE P					Marie 2017 - 南北 1850			and the second second	The same the same and the same								
Control   14	Acetone			200 (1)	1250																
Section   Sect				COMPTHIS UP				Complete Commence of the Contract of the Contr	34	340											
Ethyleroclare				AND AND ADDRESS OF THE PARTY OF		description of the second		A STATE OF THE PARTY OF THE PAR													Day Select your management of the control of the
Page   Page	Ethylbenzene	400			3300 (f)	- National Contraction of the Co			74,000												
Part   Part	Isopropythenzene	2000			3300 (f)				61,000					-0.001-U		0.001.0		0.01 U	0.01 U		
The property control of the								and the state of t	24,000 (g)	19,000 (g)			-						0.0304	0.02 U.	
The property control of the				- 98		*															
Fig. 19 per service   240								- 1				720									
Productive	And the second s		84					Print Charles and	770	710	20,000		15								
0.74			MARIO disensationens									-			0.002 U						
See Device Services   220					3300 (t)		A-1-11 (MAN) 15														
Proportional   Sept				Ministration many	2000 //				24,000 (g)	19,000 (g)	1000 A-1000-2700-1										
February   February				APPENDING TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TRANCE IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN CO					-			CAL STON WE	Marine Toronto								
NVTPH-CID   Casciline	AND AND AND AND AND AND AND AND AND AND			200					68,000	39 000			ten								
NYTPH-Dx (mg/kg) TPH-Motor Of Range TPH-Motor Of Ra				PARTICIS (SE	CHRON-YALL-YALL		Table 1 and Submit		400-000	20,000		MALE THE REAL PROPERTY.	Servation (MMS Beauty)			CONTRACTOR STATE OF THE STATE O		THE PARTY OF THE P			TO SECURITION OF THE PARTY OF T
Gasoline Korosane Kor	HYDROCARBONS (mg/kg)		ŀ				İ														
Gasoline Korosane Kor	MM(TDH HCID																				ļ
September   Sept									22,000	12.000		90.000	110	24.5.15	21.7.11	20.0 11	810	N/A	N/A		
Diese								PARK CONTRACT				00,000	A CHARLES								
Dies Cil		OCT OF STREET	- Intia mitana	-			CONTRACTOR OF THE PARTY OF	S-Seller Seller	70.000	COLUMN TO SERVICE THE PROPERTY OF THE PERSON		-							The second second second	Secure Allert Annual and Annual Annua	the Assessment Control of Control
NYTPH-Dx (mg/kg) TPH-Dissel Range TPH-Missels Barge TPH-Missels Ba		20.00	2544					200													
TPH-Holesel Range							1		CO. CON PROPRIES	· 110-100-100-100-				The second secon	and the same of th						444
TPH-Motor OI Range  TPH-Mo			i						70.000	00.000	i	i				4000					
TPH-Motor Oil Range NWTPH-G (mg/kg) TPH-Gasoline Range									70,000		-		ALCOHOLD TO THE REAL PROPERTY.								
NWTPH-G (mg/kg) TPH-Gasoline Range						and the same				-		TO STATE OF THE PARTY AND ADDRESS OF THE PARTY									
TPH-Gasoline Range											-		-	190	NA.	<b>60.6</b> 3	56.4 0	63.6	229 10	55.6 0	429 1013
PRIORITY POLLUTANT METALS (mg/kg) Assenic (7060) 1, 6 (h) 29 10 (l) 29 (l) 10 (l) 60 (l) 5 (l) 3.25 2.25 2.93 NA NA NA NA NA NA NA NA NA NA NA NA NA			1				i i														
METALS (mg/kg)  Assenic (7060)  1.6 (h)  29  10 (i)  29 (i)  10 (i)  29 (i)  10 (i)  29 (i)  10 (i)  20 (i)  30 (i)  31 (i)  323.1	TPH-Gasoline Range								22,000	13,000		80,000	110	NA NA	NA	NA	32.4	2.68 U	2.78 U	5.7	32.8
METALS (mg/kg)  Assenic (7060)  1.6 (h)  29  10 (i)  29 (i)  10 (i)  29 (i)  10 (i)  29 (i)  10 (i)  20 (i)  30 (i)  31 (i)  323.1	DDIODITY DOLLLIE MIT																				
Arsenic (756)											1		- 1								ļ
Chromium (6010)		1.0 (6)	20	10.0	20.70	10.0	60 (1)	E (1)			- 1	1		2.05	2.25	2.02	N/A	ALA.	NA	A I A	
Copper (6010) 41,000 - 100 390 190 50 19.1 14.8 13.2 12.8 NA NA NA NA NA NA NA NA NA NA NA NA NA																					
East 1/4211         800         50         4000         16         800         9         750         75									-								No. of the last of				
Nickel (6010) 20,000 120 30 625 320 200 21.4 17.5 17.3 18.7 NA NA NA NA NA NA NA NA NA NA NA NA NA									750	750											
Zinc (6010) 100,000 12,000 50 (h) 200 60 (h) 200 60 2			130							- and comments of the comments	SHALL SHALL SHALL SHALL										
Cadmium (6010) 450 8 4 125 6 20 NA NA NA NA NA NA NA NA NA			12,000	50 (h)								- Marian									
							10.10		The same of the sa	The state of the s											Section of the Section Section 1
Mercuty (7471) 310 NA NA NA NA NA NA NA NA NA NA NA NA NA									en control of the con									NA			NA NA
	Mercury (7471)	310		0.3	73	1.5	0.1							NA	NA-	na Na	NA E	NA	NA_	NA -	NA NA
	ŀ		i				ı	- 1			- 1	1	ı								1

# TABLE C-1a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (0-3 FT) PHASE III RI

Page 12 of 12

													1-1.5		1-1.5	1-1,5	1-1.5	1-1.5	1-1.5	1-1.5
Г							CREENING CI	RITERIA												
									Risk-	Based Concen	trations			COMP						
							í				Volatilization to		BA18 (1-1.5)							
Sample Identification:								Soil Ingestion, I			Outdoor Air	Groundwater	Dup of BA15 (1-1.5)	BA16 (1-1.5)	BA17 (1-1.5)	HB01 (1-1.5)	HB02 (1-1.5)	HB03 (1-1.5)	HB04 (1-1.5)	HB05 (1-1.5)
Laboratory Identification:	EPA Regio			Oregon S			Background		Construction	Excavation			0108172-19	0108172-26	0108182-20	0310117-02	0310117-07	0310117-21	0310117-16	0310117-12
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Warker	Occupational	Occupational	8/22/2001	8/22/2001	8/23/2001	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
BETX (mg/kg)							i													
EPA Method SW8021B							ŀ													
Benzene	1.4	0.03	***	3300				34	340	9400	48	0.052	NA_	NA NA	NA NA	NA	NA	NA	NA	NA NA
Ethylbenzene	490	13		3300 (f)				74,000	28,000				NA NA	NA NA	NA NA	NA NA		NA	NA NA	NA NA
Toluene	520	12	200	1440				68,000	39,000			180	NA NA	NA	NA	NA	NA	NA	NA NA	NA
Xylenes, Total	420	210						24,000	19,000			100	- NA	, NA	NA NA	NA_	NA.		NA NA	, NA
m.p-Xylene o-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)			direction date of the Co.	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA
o-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)			100 (9)	NA.	NA	- NA	NA:	NA .	NA .	NA.	NA
DIOXINS AND FURANS (ng/kg)																				
Total TEQ		-	-				**			-	1		NA NA	NA	NA	NA	NA	NA	NA	NA [

TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT)

PHASE III RI

						5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	CF	CF CF	CF	CF	CF	CF
			SCREENING CRITERIA										-				
				ed Concentration	ıs	COMP											COMP
			Soil Ingestion, Dermal	Volatilization to													
Sample Identification:			Contact, and Inhalation	Outdoor Air	Groundwater	G16 (5-5-5)	HB01 (5-6)	HB02 (5-6)	HB03 (5-6)	HB04 (5-6)	HB05 (5-6)	LW4D (31.5-33.0)	LW6D (15-16.5)			LW6D (28.5-30.0)	G2 (15-21)
Laboratory Identification: Date Collected:	PRGs	Background	Excavation Worker	Occupational	Occupational	0108172-11	0310117-03 10/15/2003	0310117-08	0310117-22 10/15/2003	0310117-17	0310117-13	R950H 03/13/97	R950J 03/13/97	R950K 03/13/97	R950L	R950M	0108151-04
	DAF=20	<del> </del>	Vvorker	Occupational	Occupational	6/21/2001	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	03/13/97	03/13/97	03/13/97	03/13/97	03/13/97	8/20/2001
SEMIVOLATILES (mg/kg)	ſ				[												
EPA Method SW8270					1												
2,6-Dinitrotoluene 2-Methylnaphthalene	0,0007 84 (b)					0.330 U 0.067 U		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.330 U
Acenaphthene	570			20 20 20		0.067 U		NA NA	NA.	NA	NA.	NA NA	NA NA	NA NA	NA NA	NA	0.067 U 1.500
Acenaphthylene	84 (b)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100		0:067 U		NA NA	NA.	NA NA	NA.	NA NA	NA:		NA.		0.067 U
Anthracene	12,000					0.067 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.720
Berizo(a)anthracene	2		590		100	0.067 U		NA NA		=NA	NANA	NA.	NA NA	NA		NA	0.960
Benzo(a)pyrene	8		59			0.067 U	NA	NA	NA	NA_	NA	NA NA	NA	NA	NA NA	NA	0.110
Benzo(b)fluoranthene						0.067 U		NA .	NA NA	NA.			NA.	NA			9.200
Benzo(g,h,i)perylene	84 (b) 49		5900		1000	0.067 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.067 U
Benzo(k)fluoranthene bis(2-Ethylhexyl)phthalate	3600 (c)	_	D800			0.067 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA. II.	0 067 U 0 067 U
Butylbenzylphthalate	930			1 18 A		0.067 U	NA NA	NA NA	NA NA	NA.	NA.	NA NA	NA NA		NA NA	NA.	0.067 U
Carbazole	0.6					0.067 U	NA	NA	NA	NA	NA	NA	NA	NA.	NA NA	NA	0.067 U
Chrysene	160	E 8 (C)	59.000	7		0.067 U	NA -	NA.	. NA	NA NA	NA.	NA NA	NA.	NA.	NA.	NA NA	0,270
Dibenz(a,h)anthracene	2		59			0.067 U	NA	NA	NA	NA.	NA NA	NA NA	NA NA	NA.	NA	NA.	0.067 U
Dibenzofuran						0.067 U		NA	. NA	NA -		NA NA	NA _	NA.			1.100
Diethylphthalate	3600 (c)					0.067 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.067 U
Dimethylphthalate Di-n-Butylphthalate	3600 (c) 2300	-		9		0.067 U 0.067 U	NA NA	NA NA	NA S	NA NA	NA NA	NA NA	NA NA	NA-	NA NA	NA NA	0.067 U
Di-n-Oxlyt ohthalate	10.000				- 41A	0.067 U	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	0.067 U - 0.067 U
Fluoranthene	4300		-		-	0.085 J	NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	2.100
Elnorene	560					0.067 U	NA	NA.	NA NA	· NA	NA.	NA	NA NA	NA NA	NA -	NA	2.100
Hexachloroethane	0.5					0.130 U	NA.	NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	0.130 U
Indena(1,2,3-cd)pyrene	14		590			= 0.067 U	NA.			NA	= i∍NA	NA.		NA NA	NA.	_ NA	0.067 J
Naphthalene	84		20,000		15	0.067 U	NA_	NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA NA	0.067 U
Pentachtoropherol Phenanthrene	0.03 84 (b)					0.330 U 0.067 U	NA= NA= NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	0.336 U 0.067 U
Pyrene-	4200					0.100 J	NA S	NA NA		NA NA	NA.	NA.					0.890
		- W.S.							Selection and a selection and		Totale N. Co.	27 TO SEE SEE SEE SEE SEE SEE SEE SEE SEE SE		4		The state of the s	
SEMIVOLATILES (mg/kg)		[ ]		1	1							ľ					
EPA Method SW8270SIM																	
Acenaphthene	570					NA	0.355	0.507	0.00667 U	0.00667 U	0.403	0.0091 U			0.0086 U		NA
Acenapi thylene	94 (b)					NA NA	0.0707 0.156	0.223 0.363	0.00667 U	= 0.00667 U		0.0091 U			0.012	0.0088 U	NA
Anthracene Benzo(a)anthracene	12,000 2		590			NA NA	0.136	0.363	0.00667 U 0.00667 U	0.00667 U 0.00667 U	0.0967 0.0213	0.0091 U 0.0091 U		NA NA	0.048 0.1	0.013 0.032	NA NA
Benzo(a)pyrene	8		59		-	NA NA	0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.0153	0.13	0.015	NA NA	0.1	0.031	NA NA
Benzo(b)fluoranthene	5			16. IP 10		NA NA	0.00933	0.00667 U	0.00667 U			0.0091 U		NA NA		0.016	NA NA
Benzo(g,h,i)perylene	84 (b)				-	NA	0.0113	0.00667 U	0.00667 U	0.00667 U	0.0167	0.0091 U			0.04	0.011	NA
Benzo(k)fluoranthene	49		8900			NA NA	0.00667 U	0.00567 U	0.00667 U	0.00667 U	0.00067 U	0.0091 U		. NA		0.03	NA NA
Chrysene	160	-	59,000			NA	0.012	0.0213	0.00667 U	0.00667 U	0.024	0.0091 U		NA	0.12	0.033	NA
Dibenz(a,h)anthracene	2		59			NA NA	0.00667 U		0,00667 U			0:0091 U			0.014	0.0088 U	
Fluoranthene Eluorene	4300 560					NA NA	0.0293 0.517	0.0333 1.53	0.00667 U 0.00667 U	0.00667 U	0.0433 0.647	0.0091 U 0.0091 U		NA NA	0.19 0.0086 U	0.05 0.0088 U	NA NA
Indeno(1,2,3-cd)pyrene	14		590			NA	0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.0091 U		NA NA	0.044	0.012	NA
Naphthalene	84		20,000		15	NA.	0.865	0.383	0.00667 U	0.00667 U	2.09	0.032	0.0082 U		0.011		NA NA
Phenanthrene	84 (b)		and the second s			NA	0.797	2.35	0.00667 U	0.00667 U	0.779	0.0091 U	0.017	NA	0.11	0.025	NA
Pyrene ==	4200				W-1-1-1	NA NA	0.096	0.207	0.00667. U	0.00667 U	0.107	0.0091 U	0.028	NA NA	0.22	0.049	NA.
												1					
CHLORINATED PHENOLS (mg/kg	1)																
Method 8040/8270SIM Pentachlorophenol	0.03	í <u>.</u> í				NA	NA	NA.	NA	NA	NA	0.0086 U	0.0077 U	NA.	0.0081 U	0.0082 U	NA
1 emacritorophenor	0.03		-		-	1975	INO.	NO.	11/4	INF	INM	0.00000	0.0077 0	NA.	0.0001 0	U.0002 U	INM
		'		'													

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Page 1 of 15

TABLE C-1b
Page 2 of 15
ARY OF DETECTED ANALYTICAL RESULTS IN SOIL:

# SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						5-5:5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	CF	· · · · · · · · · · · · · · · · · · ·		CF CF	As No CF (M. S.)	· CF
			SCREENING CRITERIA									<del> </del>				•	<del></del>
				ed Concentration		COMP						İ					COMP
Committee at the	EPA Region 9		Soil ingestion, Dermai Contact, and inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	C46 (5 5 5)	HB01 (5-6)	HB02 (5-6)	HB03 (5-6)	HB04 (5-6)	HB05 (5-6)	LW4D (31.5-33.0)	LW6D (15-16.5)	LW6D (16.5-18.0)	LW6D (24.0-25.5)	1 M/CD /08 5 30 0\	G2 (15-21)
Sample Identification: Laboratory Identification:	PRGs	Background	Excavation	Oddbool All	Groundwater	G16 (5-5.5) 0108172-11	0310117-03	0310117-08	0310117-22	0310117-17	0310117-13	R950H	R950J	R950K	R950L	R950M	0108151-04
Date Collected:	DAF=20		Worker	Occupational	Occupational		10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	03/13/97	03/13/97	03/13/97	03/13/97	03/13/97	8/20/2001
VOLATILES (mg/kg)																	
EPA Method SW8260																	
1,2,4-Trimethylbenzene		200	40,000	790	55	NA	36 J	12 J	0.01 U	0.01 UJ	153 J	NA	NA	NA	N.A.	NA	0.022 J
1,2-Dibromoethane 1,3,5-Trimethylbenzene			7.1 40,000	1.7	0.000059	NA NA	0.01 UJ 0.652 J	0.01 UJ 1.26 J	0.01 U 0.01 U	0.01 UJ 0.01 UJ	0.01 UJ 3.89 J	NA NA	NA NA	- NA NA	NA NA	NA NA	0.023 J 43.300 J
2-Butanone			40,000		12	NA .	0.032 3	- NA -	NA=	NA NA		NA NA	E DE SE SE NAT	NA NA		NA NA	0.005 UJ
4-Isopropyltoluene	12 (a)		-			NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	5.460 J
Acetone	= 16===	J-10-74-11				NA.	, NA	NA	NA		NA.						9:005 UJ
Benzene	0.03		9400	48	0.052	NA	0.01 UJ		0.01 U	0.01 UJ	0.021 J	NA NA	NA NA	NA	NA NA	NA NA	0.062 J
Carbon Disuifide Ethylbenzene	32 13					NA NA	0.608 J	NA 0.212 J	NA 0.01 U	NA 0.01 UJ	NA 11.4 J	NA NA	NA NA	NA NA	NA NA	NA NA	0.001 DJ 0.896 J
Isopropylbenzene				NO NO.		NA NA	0.657 J	1.37 J		- 0.01 UJ		NA NA	NA -	· · · · · · · · · · · · · · · · · · ·		NA-	11.300 J
m,p-Xylene	210 (g)		**			NA	4.33 J	0.982 J	0.02 U	0.02 UJ	99.4 J	NA.	NA	NA	NA NA	NA	0.097 J
Methyl lodide	e i manini	*				. NA	, NA	= _^_NA	NA *		NA NA	NA.	. NA	NA:	NA-	NA NA	0.001_UJ
Methyl tert-butyl ether Nachthalene	- 84		20.000	720	0.30	NA NA	10 UJ	10 UJ NA	10 U NA	10 UJ NA	10 UJ NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA 
Naphthaiene n-Butylbenzene			20,000		-	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA	12.700 J
n Propylbenzene						NA.	2.24 J	3.39 J	0.01 U =		20 J	NA NA			NA.		
o-Xylene	210 (g)		-		100 (g)	NA	1.68 J	0.471 J	0.01 U	0.01 UJ	41.9 J	NA NA	NA	NA	NA	NA	0.001 UJ
sec-Butylbenzene					at delt in		NA NA	NA .	NA :	NA .	NA NA	NA NA	NA			NA.	4.760 J
tert-Butylbenzene Toluene	 12	 			180	NA NA	NA 0.196 J	NA 0.0332 J	NA 0.01 U	NA 0.01 UJ	NA 3.23 J	NA NA	NA NA	NA NA	NA NA	NA NA	0.019 J 0.021 J
1.0 Gene	- 12	1000年			199	And the second		U.UUUE U		2.01.00	0.20		300 300 300 300 300 300 300 300 300 300	Mary and Address of the Assess	- Jac	100 miles	D.OLI D
HYDROCARBONS (mg/kg)																	
NWTPH-HCID																	
Gasoline		- 1		80,000	110	NA.	NA	NA	NA	NA	NA	NA NA	NA	NA NA	NA	NA	Gasoline
Keroscrie.						NA NA	, NA	- NA	NA NA	NA	NA	NA.	NA.	NA	NA.	NA	58.1 U
Diesel Lube Oil						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	Diesel Lube Oil
	F-9 1074-1144	***				NA	NA.	NA STATE	NA.	DIA.	INA		117	ISM	IVM.	INM	Lune Oil
NWTPH-Dx (mg/kg)		ĺ			1												4760 J
TPH-Diesel Range				-		NA NA	2710 J NA	7170 J NA	159 NA	16.9 U NA	2200 NA	6.9 U NA	6.1 U NA		NA NA	6.4 U	NA NA
TPH-Motor Oil Range	-	-				NA	109 J	280 MJ	70.7 M	56.2 ∪	83.3 M	NA	NA	NA	NA	NA	58.1 U
AUGCEPH Co (man flow)																	
NWTPH-G (mg/kg) TPH-Gasoline Range				80.000	110	NA	2540	1540 J	3.43	121	8120	4.6	5.0 U	NA	5.0 U	5.0 U	1860 J
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				,													
PRIORITY POLLUTANT		1															
METALS (mg/kg)							*1*	NA	NA	NA	NA	NA.	NA	NA	*14	NA	4.25
Arsenic (7060) Chromium (6010)	29 38	5 (j) 23 1	-	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	4.25 14.2
Copper (6010)		19.1		(8)		NA	NA	NA.	NA	NA	NA	NA	NA	NA NA	NA NA	NA	12.1
Lead (7421)		9	750		30	NA NA	29.1		3,58	1.67 U	1,61 U		. NA		NA		3 72 U
Nickel (6010)	130	21.4				NA	NA.	NA.	NA	NA NA	NA	NA	NA	NA	NA	NA	15.8
Zinc (6010)	12,000	60.2				NA.	43.8	39.1	45,4	48.4	44,9	NA .	NA.	NA .	NA.	NA NA	42.7
Cadmium (6010)	8					NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA
Mercury (7471)					GERNER.	NA.	NA .	NA	NA.	NA _	NA.	NA .	NA.	NA	N.A.	NA	NA
											i						

# BZTO104(e)023386

#### TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

Page 3 of 15

5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 CF CF CF CF CF CF SCREENING CRITERIA Risk-Based Concentrations COMP COMP Sample Identification: EPA Region 9
PRGs Soil Ingestion, Dermal Volatilization to Leaching to HB01 (5-6) 0310117-03 HB02 (5-6) 0310117-08 HB03 (5-6) 0310117-22 HB04 (5-6) 0310117-17 HB05 (5-6) 0310117-13 \_W4D (31.5-33.0) LW6D (15-16.5) LW6D (16.5-18.0) R950H R950J R950K LW6D (24.0-25.5) LW6D (28.5-30.0) G2 (15-21) R950L R950M 0108151-04 G16 (5-5.5) Contact, and Inhalation Outdoor Air Groundwater Laboratory Identification: 0108172-11 Excavation DAF=20 8/21/2001 10/15/2003 10/15/2003 10/15/2003 10/15/2003 10/15/2003 03/13/97 03/13/97 03/13/97 BETX (mg/kg) EPA Method SW8021B 9400 0.06 U 0.069 U 0.071 U 0.03 0.052 0.074 U Benzene Ethylbenzene .... 13 NA NA NA NA NA NA 0.12 J 0.06 ⊍ 0.069 U 0.071 U NA Toluene 180 0.074 U 0.06 U 0.069 U Xylenes, Total 210 100 NA.... NA NA NA NA NA NA NA. NA -NA .... NA . m,p-Xylene 210 (g) NA NA NA NA NA 0.49 0.06 U 0.069 U 0.071 U = - 100 (g) NA NA NA. 0.074 U .0.08 U - NA 0:071 U NA DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA NA NA NA NA NA NA NA NA NA

TABLE C-1b

# TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF.	CF	CF	· · · · · · · · · · · · · · · · · · ·	CF	CF	· CF	CF	CF	CF	CF.	ÖF	CF : Jan 1
			SCREENING CRITERIA			<u> </u>				*								
		T	Risk-Base	d Concentration	5	COMP	COMP	COMP	COMP	COMP	COMP	COMP		COMP		COMP		
			Soil Ingestion, Dermal	Volatilization to	Leaching to													
Sample Identification:		1	Contact, and Inhalation	Outdoor Air	Groundwater	G3 (11-15)	G8 (14-24)	G9 (13-15)	G12 (13-20)	G13 (14-17)	G14 (13-15)	G16 (15-18)	BA1 (14-15)	BA12 (11-13)	BA15 (17-18)	BA16 (16-17)	BA17 (12-13)	G2-4 (18.5-19.5)
Laboratory Identification: Date Collected:		Background	Excavation Worker	Occupational	Occupational	0108151-12 8/20/2001	0108151-17 8/20/2001	0108189-11 8/24/2001	0108151-21 8/20/2001	0108172-04 8/21/2001	0108172-08 8/21/2001	0108172-12 8/21/2001	0108172-35 8/22/2001	0108151-08 8/20/2001	0108172-24 8/22/2001	0108172-28 8/22/2001	0108182-22 8/23/2001	0207087-02 7/11/2002
SEMIVOLATILES (mg/kg)		I		T	T													
EPA Method SW8270																		
2,6-Dinitrotoluene	0.0007			,		0.330 ∪	0.330 U	1.700 U	0.330 U	0.330 U	0.330 U	0.330 U	0.330 L	0.330 U	0.330 U	0.330 L	3.300 U	NA.
2-Methylnaphthalene	84 (b)	- 1				0.067 U	0.067 U	9.700	0.067 U	0,320	6.800	0.067 U	0.067 L					
Acenaphthene	570					0.067 U	0.370	0.330 U	0.067 U	0.067 U	0.067 L		0.067 L					NA
Acenaphthylene Anthracene	84 (b) 12.000					0.067 U 0.067 U	0.067 U 0.067 U	0.330 Ü 0.520	0.067 U 0.067 U	0.067 U 0.067 U	0.067 L 0.067 L		0.067 L 0.067 U			0.067 L 0.067 L		
Benzo(a)anthracene	12,000	-	590			0.067 U	0.067 U											NA NA
Benzo(a)pyrene	8		59	-		0.067 U	0.067 U	0.067 U	0.067 U	0.067 U			0.067 U	0.067 U		0.075 5	0.099	NA NA
Benza(b)fluoranthene	5				1 N. AL-42 V. S.	0.067 U	0.067 U			0.067 U			0.067 L			0.110 J		NA NA
Benzo(g,h,i)perylene	84 (b)		**			0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.610	0.067 L	0.067 U	NA
Benzo(k)/lixorenthene	49		5900			0.067 U	0.067 U.	0.067 U	0.067 U	0.067 U			0.067 U			0.067 L		
bis(2-Ethylhexyl)phthalate	3600 (c)	-	-			0.150	0.067 U	0.330 U	0.067 U	0.067 U			0.067 U	0.067 U				NA
Butylbenzylphthalate	930		77			0.067 U	0.067 U	0,330 U	0.067 U	0.067 U			0.067 U					
Carbazole	0.6 160		59,000	-		0.067 U 0.067 U	0.067 U 0.067 U	0.330 U 9.067 U	0.067 U 0.067 U	0.067 U 0.067 U			0.067 U 0.067 U	0.067 U 0.067 U				NA NA
Chrysene Dibenz(a,h)anthracene	2	_	59,000 59			0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U		0.067 U	0.067 U	0.067 L			NA NA
Dibenzofurán			38			0 067 ⊍	0.067 U	0.330 U					0.067 U	0.067 U				NA NA
Diethylohthalate	3600 (c)					0.067 U	0.067 U	0.330 U	0.067 U	0.067 U	0.067 U		0.067 U	0.067 U	0.067 U			NA NA
Dirnethylphthalate	3600 (c)		-			0.067 U	9.067 U	U 0880,01	0.0671/	0.067 U	0 067 U	- 0,067 U	-0.067 U	0.067 U	0.067 U	- 0.067 L	0.670 U	NA .
Di-n-Butylphthalate	2300		**			0.067 U	0.067 ⊔	0.330 U	0.067 U	0.067 U	0.067 U		0.067 U	0.067 U	0.067 U			NA NA
Di-n-Octyl phthalate	10,000					0.067 U	0:240	0.330 U	0.067 U	0.067 U			0.067=U					NA NA
Fluoranthene	4300			-		0.150	0.067 U	0.330 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	1.600 J	0.120 J	1.800	NA NA
Fluorene	560					2,200	0.880	3,300	0.087 U	0.780	0.170	0.067 U 0.130 U	0.067 U					NA NA
Hexachloroethane Indeno(1,2,3-cd)pyrene	0.5 14		590	-		0.130 U 0.067 U	0.130 U 0.067 U	0.130 U	0.130 U 0.067 U	0.130 U 0.087 U	0.130 U 0.087 U		0.130 U 0.087 U	0.130 U 0.067 U	0.130 U 0.480			NA NA
Nachthalene	84		20,000		15	0.067 U	0.067 U	4.800	0.067 U	0.067 U	1.900	0.067 U	0.130 U	0.130 U	0.130 U	0.130 U		NA
Pentachlorophenol	0.03	A HILE ED	3.00			0.330 U	0.330 U	1,700 U	0.330 U	0.330 U	0.330-U		0.330 U		C 330 U			NA NA
Phenanthrene	84 (b)		**			2.100	1,400	4.900	0.067 U	0.790 J	0.150 J	0.067 U	0.067 U	2.100	0.880 J	0.070 J	6.800	NA
Pyréne	4200	1444				0.150	0.067 U	0:067 U	0.067 U	0.067 U	0.067 J	0.067 U	0.067 U	0.120	1.700 J	0.170 (	1.100	NA
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM Acenaphthene	570					NA	NA	NA	NA	NA.	NA							
Acenaphthylene	84 (b)					NA	NA	NA NA	NA .	NA.	NA NA	NA	NA.	NA	NA NA	NA.	NA.	NA NA
Anthracene	12,000					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	2		590		- 2	NA NA	- NA	NA	NA	-NA	NA.	- NA	NA.	NA.	NA:	NA	NA	NA
Benzo(a)pyrene Benzo(b)fueranthene	8 5		59			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA-	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthone	49		5900			NA .	NA NA	NA.	NA.	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA		
Chrysene	160		59.000		**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA NA	NA NA
Dibenz(a,h)anthracene	2		597			. NA	NA NA	. NA	N.A.	NA .	NA NA	NA NA	NA .	NA.	NA.	NA NA	NA .	NA L
Fluoranthene	4300					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	560					NA NA	NA		NA NA	NA NA	NA /	NA			NA.	NA.	NA NA	NA .
Indeno(1,2,3-od)pyrene	14		590			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
Naphthalene .	84		20,000		15	NA	NA.	NA		NA I	NA.	NA .		NA .		NA.	NA	NA.
Phenanthrene	84 (b) 4200			 North ar Strik fair		NA T	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	4200				4 No. 10	NA.	. NA	TNA	NA.	NA S	NA.	NA	WAS ENA	NA	. A LINA	NA .		NA .
CHLORINATED PHENOLS (mg/ks Method 8040/8270SIM Pentachlorophenol	0.03	-				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ļ		I	1	I	ļ													

7/19/05 \\Edmidata\\verbroil231\\003\\132\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II | 071905\\Phill II

TABLE C-1b

Page 5 of 15

V OF DETECTED ANALYTICAL RESULTS IN SOIL:

# SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF :	· CF	CF	CF.	( <b>CE</b> ()	CF	CF	CF	CF	CF	CF	CF
				ed Concentration		COMP	COMP	COMP	COMP	COMP	COMP	COMP		COMP		COMP		
Sample Identification: Laboratory Identification:	PRGs	Background	Soil Ingestion, Dermal Contact, and Inhalation Excavation		Groundwater	G3 (11-15) 0108151-12	G8 (14-24) 0108151-17	G9 (13-15) 0108189-11	G12 (13-20) 0108151-21	G13 (14-17) 0108172-04	G14 (13-15) 0108172-08	G16 (15-18) 0108172-12	0108172-35	BA12 (11-13) 0108151-08	BA15 (17-18) 0108172-24	BA16 (16-17) 0108172-28	BA17 (12-13) 0108182-22	G2-4 (18.5-19.5) 0207087-02
Date Collected:	DAF=20	<u> </u>	Worker	Occupational	Occupational	8/20/2001	8/20/2001	8/24/2001	8/20/2001	8/21/2001	8/21/2001	8/21/2001	8/22/2001	8/20/2001	8/22/2001	8/22/2001	8/23/2001	7/11/2002
VOLATILES (mg/kg) EPA Method SW8260																		
1,2,4-Trimethylbenzene			40.000	790	55	0.00443	0.001 U	44.90	0.00229	0.001 U	54.000	0.001 U	0.001 U	3.830	0.001	J 0.001 l	J 0.104 J	NA
1,2-Dibromoethane			71	1.7	0.000059	0.001 U	n,ao1 U			0.050 U			_0 001_U					
1,3,5-Trimethylbenzene			40,000		12	0.00604	0.001 U		0.001 U	0.001 U		0.001 U	0.001 U		0.001 l			NA
2-Butanone 4-Isopropyltoluene	12 (a)					0.005 U 0.0137	0.005 U 0.001 U	0.005 l 0.415	J 0.00567 0.001 U	0.005 Ü 0.001 U		0.005 U 0.001 U	0.005 U 0.001 U		0.005 I 0.001 U			NA NA
Acetone	12 (8)					0.0137	0.014		0.0185	0,005 U	0.005 L		0.0123	0.0682	0 005 1		0,0913	NA.
Benzene	0.03		9400	48	0.052	0.001 U	0.001 U	0.00312	0.001 U	0.001 U		0.001 U	0.001 U		0.001 U	0.001 U		NA
Carbon Disulfide	32					0 001 U	0.001 U			0,001 U								
Ethylbenzene	13	-	-		-	0.0426 9.420	0.001 U	13.200	0.00135 0.00811	0.106 4,150	18.800	0.001 U 0.001 U	0.001 U 0.001 U		0.001 l			NA NA =
tsopropylbenzene m,p-Xylene	210 (g)	-				0.0281	0,174 0.002 U	5.85U 56.200	0.00337	0.129	52.300	0.002 U	0.002 U		0.001 U 0.002 U			NA NA
Methyl lodide	210 (g)					0.001 U	0.001.0		0.00007 0.001 U		0.001 U							NA.
Methyl tert-butyl ether		-		720	0.30	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA.	NA
Naphthalene	84	E 07 15 15 15	20,000		- 15	0.0164	0.0164		0.011	0.010 U	2.860		0010 U		0.010 t			NA NA
n-Butylbenzene				100 / 100 / 100 / 100		20.500	0.406 0.505	5.610	0.0412	2.870 5.870	7.760 24.400	0.002 U 9.001 U	0.002 U 0.001 U		0.002 U			NA NA
n-Propylbenzene o-Xylene	210 (g)				100 (g)	37,500 0.0228	0.505 0.001 U	8.530 16.000	0.0147	0.0935	0,050 U	0.001 U	0.001 U		0.001 L			NA NA
sec-Butylbenzene	210 (g)				100 (g)	5.550	0.529	0.931	0.0594	3.100	7.880	0.001 U	0 001 U		0.001 (			
tert-Butylbenzene	-		**			0.103	0.001 U	0.001 (		0.0388	0.107	0.001 U	0.001 U		0.001 L	0.001 L	J 0.001 U	NA
Toluene	- 12				180	0.0261	0.00246	0.380	0.00143	0.218	0.356	0.001 U	0.001 U	0.00574	0.004 (	0,001 L	0.0360	NA
HYDROCARBONS (mg/kg)																		
NWTPH-HCID					•													
Gasoline		<u></u>		80,000	110	Gasoline	22.2 U	Gasoline	22.5 U	Gasoline	Gasoline	22.5 U	24.7 U	23.3 U				23 U
Kercsene						57.5 U	56.6 U	56.6 L		58.6,U	56 8 U			58 1. 0				
Diesel Lube Oil	 			-		Diesel	Diesel 111-U	Diesel Lube Oil	Diesel Lube Oil	Diesel 418 U	56.8 U		61.7 U 123 U	Diesel 116 L	57.5 U			57.5 U - 115 U
Luce Oil						Lane Ou		Lanexons	- Euraichte	1000		Lik U	120.0					
NWTPH-Dx (mg/kg)				·	ł								NA	8190 J			9480 J	
TPH-Diesel Range						7030 J	5850J	8270 J	2420 J NA	2720 NA	NA NA	NA NA	NA NA	NA NA	NA NA .	NA NA	9480JJ	NA NA
TPH-Kerosege Hange TPH-Motor Oil Range		HACADOTA TA		-		485	55.6 U	284 L		58.8 U	NA NA	NA NA	NA	291 U		NA NA	225 U	NA NA
-																		
NWTPH-G (mg/kg) TPH-Gasoline Range				80,000	110	1270 J	NA	2050	NA	2940	4880	NA	NA	NA	NA	NA	1600	NA
TELL-CASOLITE Hange				40,000	110	12.0		2000	***	20.10	1000							
PRIORITY POLLUTANT																		
METALS (mg/kg)																		
Arsenic (7060)	29 38	5 (j)				1.92 14.7	2.15 13.7	2.78 14.4	2.7 13.4	2.24 12.5	2.39 16	2.21 16.4	1.86 16.4	2.59 15.1	2.14 18.0	3.22 16.1	2.13 13.5	NA NA
Chromium (6010) Copper (6010)	 	23.1 19.1				12.8	13.7	14.4 12.8 J	13.2	12.0	13.1	14.0	15	13.3	14.5	14.3	12.3	NA NA
Eead (7421)		9	750		30	2.85	1,92 U	2,28	1.85 U	1.72 U	1.92 U		3.14	2.50	7:17	1.92 U		NA NA
Nickel (6010)	130	21.4	D18 D18 K-18 D18 C18 D18 D18 D18 D18 D18 D18 D18 D18 D18 D18 D18 D18 D18 D			16.9	16.8	16.4	16.2	15.4	17.8	18.2	17	16.5	19	17.3	17	NA
Zinc (6010)	12,000	60.2				46.6	45.3	43.2	44.5	42.4	55.2	161	233	44.5	496	1020	43.5	NA
0.11						MA	N12	N/ *	Ne	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (6010) Mercitry (7471)	8			.0.0	Egg (P.)	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA		NA NA	NA NA	NA NA	NA NA
manually (1971)	The part of the same			STATE OF THE STATE OF						150		The second second second	# 00 mg 5 days - \$0 1.77 (\$ 60 d s)	era - ESPACIONES MAIS	Constitution of the Lands			- Andrews

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#### TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

Page 6 of 15

CF CF CF CF CF CF CF CF. CF CF CF SCREENING CRITERIA Risk-Based Concentrations COMP COMP COMP COMP COMP COMP COMP Soil Ingestion, Dermal Volatilization to G12 (13-20) 0108151-21 G3 (11-15) G8 (14-24) 0108151-17 G9 (13-15) 0108189-11 G14 (13-15) 0108172-08 Sample Identification: EPA Region 9 Contact, and Inhalation Outdoor Air G13 (14-17) 0108172-04 G16 (15-18) BA1 (14-15) BA12 (11-13) BA15 (17-18) BA16 (16-17) BA17 (12-13) G2-4 (18.5-19.5) 0108151-12 Laboratory Identification: Date Collected: PRGs 0108172-24 8/22/2001 0108172-28 8/22/2001 Background 0108172-12 0108172-35 0108151-08 0108182-22 8/23/2001 0207087-02 7/11/2002 Excavation 8/20/2001 8/24/2001 8/21/2001 8/21/2001 8/21/2001 Worker 8/20/2001 8/22/2001 8/20/2001 BETX (mg/kg) EPA Method SW8021B 0.03 Benzene 0.052 13 12 180 NA . NA. NA ... NA NA NA Ethylpenzene. NA NA NA NA NA NA NA NA NA NA Toluene NA NA NA NA NA NA Xylenes, Total 100 NA NA NA NA m,p-Xylene 210 (g) NA NA NA NA NA NA NA NA NA NA NA NA NA NA o-Xylene 210 (g) NA. DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA NA NA NA NA NA NA NA NA

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TABLE C-1b WMARY OF DETECTED ANALYTICAL RESULTS IN SOIL:

# SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF .	CF	CF	ČF.	CF.	CF :	CF	CF:	CF 1	CF
			SCREENING CRITERIA			<u> </u>										
		1		ed Concentration	ns	1										
		1	Soil Ingestion, Dermal	Volatilization to		1										
Sample Identification:	EPA Region 9	1	Contact, and Inhalation	Outdoor Air	Groundwater	G2-5 (16-17	) G12-3 (17.5-18.5	G13-4 (14 5-15	5) HB01 (10-11)	HB01 (14-15)	HB02 (10-11)	HB02 (13-14)	HB03 (10-11)	HB04 (10-11)	HB04 (12-13)	HB05 (10-11)
Laboratory Identification:	PRGs	Background	Excavation	Gatagorius		0207087-03		0207087-05	0310117-04	0310117-05	0310117-09	0310117-10	0310117-23	0310117-18	0310117-19	0310117-14
Date Collected:	DAF=20		Worker	Occupational	Occupational		7/11/2002	7/11/2002	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
SEMIVOLATILES (mg/kg)	i i	ì		T	<del></del>											
EPA Method SW8270																
2,6-Dinitrotoluene	0.0007				1					*14	***	61.6		***		
2-Methylnaphthalane	84 (h)					NA NA		NA NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA NA
Acenaphthene	570	Carried Street, Square	and the fifther of the contract of the contrac	Add of the same of the same of the same of					NA NA			NA NA	NA	NA	NA	Parkagements when removed \$10000
Acenaphthene	84 (b)			-		NA NA		NA NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA
Anthracene	12,000								NA NA	NA .	NA.			NA.	NA .	
Benzo(a)anthracene	12,000					NA		NA NA		NA NA	NA	NA	NA	NA	NA	NA
	8				A CONTRACTOR OF STREET	NA.		NA.	NA-	NA.			NA.	NA	. NA	
Benzo(a)pyrene Benzo(b)fluoranthene	- 5		59	THE RESERVE AND ADDRESS OF THE PARTY AND ADDRE		NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA_
Benzo(g,h,i)perviene	84 (b)	A SAN TANKS				NA NA		NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA.	NA:
Benzo(k)/fuoranthone	49		5900	11 12 14 15	_	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA		NA	NA	NA
bis(2-Ethylhexyl)phthalate	3600 (c)	Page 191 (***)	2900			NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	LE LE MA	NA.
Butylbenzylohthalate	930					NA NA		NA NA	NA NA		NA NA	NA NA			NA NA	NA
Carbazole	0.6	-	Carrier Street Street Contraction		a de una politica semi	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	, NA		
Chrysene**	160		59,000			NA NA		NA NA	NA NA	NA I		NA NA	NA NA	NA =NA	NA NA	NA NA
Dibenz(a,h)anthracene	2		59		THE RESERVE	NA.		NA NA	NA NA	NA	NA	NA NA	NA	NA NA	NA NA	
Dipenzoluran			28			NA NA		NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Diethylphthalate	3600 (c)			-		NA NA		NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	, NA NA	
Dinethylphthalate	3600 (c)					NA NA		NA NA	NA S	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Di-n-Butylphthalate	2300		-			NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA:	
Dr.n-Octyl-phthalate	10,000					NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	4300					NA NA		NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	
Fluorene	560					NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA
Hexachloroethane	0.5					NA.		NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA
Indenol 1.2.3-cd) pyrene	- (4		590	N. W. S. W.			NA T	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA I		NA NA
Naphthalene	84		20,000		15	NA.		NA	NA NA	NA.	NA.	NA NA	NA	NA NA	NA NA	NA
Pentachlorophenol	0.03		20,000				NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA (	NA NA	
Phenanthrene	84 (b)	District and its definite	. 1027 1002 100 100 100 100 100 100 100 100 10	340 524 State Stat	-	NA.		NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	4290					NA.			NA NA	NA.	NA NA	NA.	NA NA	NA NA	NA NA	
SEMIVOLATILES (mg/kg)		CONTRACTOR STREET		2.4.5% A. V.	Transmiss Belle Sciences		CONTRACTOR OF STREET		TAX.	180		armonic ad 1000 an	190	MATERIAL STATES		A CONTRACTOR
EPA Method SW8270SIM																
Acenaphthene	570	**	İ			NA	NA	0.0373	0.442	1.01	1.13 J	1.48	0.656	0.00667 U	0.0227	0.588
Acenaphthylene	84 (b)					NA NA		0.0247	0.076	0.208	0.44 J	0.483	0.162	0.00667 U	0.0227	0.162
Anthracene	12,000					NA		0.00667 U	0.187	0.409	0.653 J	0.793	0.312	0.00667 U	0.036	0.179
Benzo(a)anthracene	2 2		590			. NA		0.00667 U	0.0147	0.018	0.0353 J	0.12	0.0173	0.00667 U		0.0233
Benzo(a)pyrene	8	**************************************	59	100000000000000000000000000000000000000	THE COURT STREET, STRE	NA.		0.00667 U	0.00667 U	0.00667 U	0.012 J	0.072	0.00733	0.00667 U	0.0273	0.0167
Benzo(o)fluoranthene	5					NA.		= 0.00667 U		0.01	0.0147 J	0.0587	0.01	0.00667 U	0.026	0.0173
Benzo(g,h,i)perviene	84 (b)	-			DESCRIPTION OF THE PLANTS	NA		0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.0587	0.00667 U	0.00667 U	0.0127	0.0113
Benzo(k)finoranthene	49		5900	.018		NA NA		0.00667 Ú			0.00567 U	0.0207	0.00867 U	0:00667 U	0.0107	0.00667 U
Chrysene	160	**	59,000		-	NA.	NA	0.00667 U	0.0147	0.022	0.0473 J	0.147	0.024	0.00667 U	0.0253	0.0247
Dibenzia hjanthracene			- 59	Section 1		NA.		0.00567 U		0.00667 U		0.014	0.024 0.00667 U		0.0067 U	0.00667-IJ
Fluoranthana	4300			AND DESCRIPTION OF THE PARTY OF		NA	NA	0.00667 U	0.034	0.05	0.107 J	0.107	0.0653	0.00667 U	0.06	0.0507
Fluorene	560					NA.		0.142		2.18	3,16 J	3,53	- 1.22	0.0113		0.855
Indeno(1,2,3-cd)pyrene	14		590			NA NA	NA NA	0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.0473	0.00667 U	0.00667 U	0.01	0.00667 U
Naphthelene	84		20.000	Barraga (	15	NA.		0.00667 U		6.3	0.507 J	0.96	10.6	0.00667 U		
Phenanthrene	84 (b)			-		NA NA	NA NA	0.165 U	1.11	3.24	4.34 J	6.17	2.03	0.00667 U	0.101	1.17
Pyrene	4200					NA.		0.00687 U		0.0993	0.471-J	0.17	0.152	0.00667 U		0.121
				- Maria			and the second second	2.4000	THE PERSON NAMED IN	AL PROPERTY OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COL	WITH CHARLES	VIP.	VIIIA	VIVORANT DE	error party was with the	THE LANGE BURNEY
CHLORINATED PHENOLS (mg/kg	,															
Method 8040/8270SIM	· ]	l j	ļ		j J											
Pentachlorophenol	0.03					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA
													1411			.,,,

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Page 7 of 15

Page 8 of 15

# TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF 1	CF	CF	CF	CF	CF	CF	CF ·	CF	CF
			SCREENING CRITERIA													
		T		d Concentration	s	f										
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1										
Sample Identification:			Contact, and Inhalation	Outdoor Air		G2-5 (16-17	G12-3 (17.5-18	.5)G13-4 (14.5-15	.5) HB01 (10-11)	HB01 (14-15)	HB02 (10-11)	HB02 (13-14)	HB03 (10-11)	HB04 (10-11)	HB04 (12-13)	HB05 (10-11)
Laboratory Identification:	PRGs	Background	Excavation			0207087-03		0207087-05	0310117-04	0310117-05	0310117-09	0310117-10	0310117-23	0310117-18	0310117-19	0310117-14
Date Collected:	DAF≒20	1	Worker	Occupational	Occupational	7/11/2002	7/11/2002	7/11/2002	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
VOLATILES (mg/kg)		1		1	ĺ	1										
EPA Method SW8260						j										
1,2,4-Trimethylbenzene			40,000	790	55	NA.	NA NA	NA.	116 J	141 J	0.022 J	0.0169 J	151	0.01 U	0.0157 J	114 J
1,2-Dibromoethane			7.1	1.7	0.000059		NA.									
1,3,5-Trimethylbenzene			40,000		12	NA		NA	5.81 J	8.29 J	1.71 J	2.42 J	8.13	0.01 U	1.09 J	5.13 J
2-Butanone							NA			NA NA	NA NA	NA -	NA .		NA -	Andre Literatural contribition - Chor
4-isopropyltoluene Acetone	12 (a) 16	-			- A-42	NA NA		NA .	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA .
Benzene	0.03		9400	48	0.052	NA		NA	0.1 U.		0.0857 J	0.0942 J	NA 0.1 U		0.01 UJ	NA 5.29 J
Carbon Disuffide	32	-	9400	40	0.052	NA NA		NA NA	NA .	NA NA	NA.	0.0942]0	NA.	NA.	0.01 03 NA	NA NA
Ethylbenzene	13				A STATE OF THE REAL PROPERTY.	NA		NA NA	11.8 J	33.6 J	0.0574 J	0.0563 J	39	0.01 U	0.01 UJ	
Isopropylhenzene						NA			6.47		1,93 J	2.72 J	8.93	0.01 U	1.42 J	5.27.1
m,p-Xylene	210 (g)		••	**		NA	NA	NA	89.6 J	239 J	0.194 J	0.332 J	182	0.02 U	0.0448 J	182 J
Methyl lodide		12.750				NA.	NA.	NA.	NA NA	NA.	NA .	NA.	NA NA	NA	NA	NA.
Methyl tert-butyl ether				720	0.30	NA.	NA	NA	100 UJ			10 UJ		10 U	10 UJ	10 U.
Naphthalene	84		20,000	•	15	NA.				NA NA	NA.	NA.	- NA		NA NA	
n-Butylbenzene					CARROLL SEATHERS	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propyibenzene						<sub>2</sub> NA				21.9 ∂	3.82 J	5.63 J	28.8	0.01 U		16 J
o-Xylene	210 (g)		**		100 (g)	NA NA		NA NA	35.4 J NA	88.6 J	0.0941 J	0.114 J	112 NA	0.01 U NA	0.0304 J	67.9 J
sec-Butylberzene				- 42		NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
tert-Butylbenzene foluene	- 12		-	-	180	NA NA						0.225 J		0.01.0	0.0205	64.9
Indelle		D4000000000000000000000000000000000000				ESSENT BENT ALCOHOL	CONTRACTOR OF THE STATE OF THE	day _ correct region Ma		20,0	V.Duitu.u.		1.40-0			Land Control of the C
HYDROCARBONS (mg/kg)																
NWTPH-HCID		l														
Gasoline			_	80,000	110	23.5	U 22.2 U	J NA	NA.	NA	NA	NA	NA	NA	NA	NA
Kerosene						. 58 7	U 55.6 t	J NA	, NA	NA.	. NA	NA NA	NA	NA NA	NA	NA:
Diesel					-	Diesel	55.6 L		NA	NA	NA NA	NA.	NA	NA	NA	NA NA
Lube Oil						. Lube Oil	111_1	J NA	NA .	NA .	NA-	NA NA	NA	NA	NA	NA
NWTPH-Dx (mg/kg)																
TPH-Diesel Range						1550	J NA	304	4020 J	10100 J	12000 J	13100 J	5250 J	893 J	2430 J	5910 J
TPH-Kerosene Rango						NA.	NA-	NA NA		NA NA	NA -	NA	NA s	NA	NA NA	NA NA
TPH-Motor Oil Range						225	J NA	54.8 L	J 83 MJ	588 U	585 U	561 U	218 MJ	190 MJ	117 MJ	101 M
NWTPH-G (mg/kg)																
TPH-Gasoline Range				80,000	110	NA	NA	119	3280	6880	1830 J	2670	8560	10.1	1330 J	3070
PRIORITY POLLUTANT																
METALS (mg/kg)																
Arsenic (7060)	29	5 (j)			THE TAXABLE PROPERTY.	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA
Chromium (6010)	38	23.1				, NA		NA NA		NA	NA	NA	NA	NA	NA	NA.
Copper (6010) Lead (7421)		19.1	750		 	NA	NA NA	NA NA	NA NA	NA P.00	NA LEXTE	NA 1-42-11	NA 1.05	NA 1011	NA 150 II	NA 1611
Lead (7421) Nickel (6010)	130	9 21.4			30	NA NA	NA = NA	NA – NA	37.1 NA	3,22 NA	=1.61 U NA	1.43 U NA	2.05 NA	1.64 U NA	1.56 U NA	1,64 U NA
Zinc (6910)	12,000	60.2	101.01.01.01						42.5	47.7	50,1		44.8	45.4		45
CHINCIQUIU)	14,000		Continued to applications and property			- GPA	140	147	TANK TANK	77.5				14.7	744	30
Cadmium (6010)	8					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)						NA.	NA -	NA.	NA NA	NA NA	NA	NA NA	NA .	NA NA	- NA	NA NA
·			Ì													

7/19/05 \\Edmidata\pyrock291\009\132\Phill RI 071905\Phill RI RPI, App C MTF >3

# TABLE C-1b Page 9 of 15

# TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF.	CF	CF	CF	CF	CF	CF · ·	° • OF	CF	CF
•			SCREENING CRITERIA													
•			Risk-Base	d Concentration	s											
			Soil Ingestion, Dermal	Volatilization to	Leaching to	]										
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	G2-5 (16-17)	G12-3 (17.5-18.5)	G13-4 (14.5-15.5	) HB01 (10-11)	HB01 (14-15)	HB02 (10-11)	HB02 (13-14)	HB03 (10-11)	HB04 (10-11)	HB04 (12-13)	HB05 (10-11)
Laboratory Identification:	PRGs	Background	Excavation			0207087-03	0207087-04	0207087-05	0310117-04	0310117-05	0310117-09	0310117-10	0310117-23	0310117-18	0310117-19	0310117-14
Date Collected:	DAF=20		Worker	Occupational	Occupational	7/11/2002	7/11/2002	7/11/2002	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
BETX (mg/kg)																
EPA Method SW8021B																
Benzene	0.03		9400	48	0.052	NA.	NA	0.0274 U	NA	NA	NA	NA	NA	NA	NA	NA
			9400	46	0.052	hosm entent	INA CHECK VIEW HOME CONTROL			IVA	NA NAN	IVA DOMESTICA DE SECUTO		NA NA		The second secon
Ethylbenzene					- CARROLL SERVICE	<b>企业工作工程</b>	S SECTION NAMES	0.116 U	Million States of Management of the All Colds		CONTRACTOR CONTRACTOR	NAME OF THE OWNER.	NA NA		NA -	
Toluene	12	MANAGEMENT HISTORY	AND A SERVICE AND THE OWN FROM THE RESIDENCE AND A SERVICE	ummerum ummunitari	180	NA.	NA	0.110 U		NA	NA	NA	NA	NA NA	NA	NANA
Xylenes, Total	210				100	NA	NA NA	0.329 U		NA .	NA	ŅĀ		NA :		NA =
m,p-Xylene	210 (g)		-			NA.	NA	NA	NA	NA	NA	NA	NA	N.A.	NA	NA.
o-Xylene	2.10 (g)				100 (g)	A.VI	- NA	- NA	NA	NA NA	- NA	NA.	NA.		NA	NA NA
DIOXINS AND FURANS (ng/kg)					ļ	1										
Total TEQ						NA	NA	NA	NA	NA	NA	NA	AM	NA	NA	NA

TABLE C-1b Page 10 of 15

## TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	58 - 2 A <b>CF</b> A 24 12-		CF	· · · · · · · · · · · · · · · · · · ·	CF OF C	- 1.584 <b>CF</b> 97 - 11	CF	CF	CF	CF.
			SCREENING CRITERIA							<del></del>						
		1		ed Concentration	P.	ł										
		i	Soil Ingestion, Dermal	Volatifization to		ł										
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	LW19S (16.5-17.5)	LW20D (12-13)	LW21S (13.5-14.5)	LW22D (24-25)	LW23D (22.5-23.5)	LW24D (26-27)	LW25D (28-29)	LW26D (15-16)	LW27S (13.5-14.5)	LIM270 (21-22)	LW35D (27-28)
Laboratory Identification:	PRGs	Background	Excavation	Odidoor All	Groundwater	0309195-01	0310011-01	0310149-03	0309163-04	0309163-03	0310149-02	0310149-01	0309185-01	0309185-02	0309185-03	0310011-02
Date Collected:	DAF=20		Worker	Occupational	Occupational	9/29/2003	9/30/2003	10/21/2003	9/24/2003	9/24/2003	10/20/2003	10/20/2003	9/25/2003	9/25/2003	9/25/2003	10/1/2003
		i		1												
SEMIVOLATILES (mg/kg)																
EPA Method SW8270 2,6-Dinitrotoluene	0.0007					NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	A14
	64 (b)				-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA		NA NA
2 Mathylnaphthalene Acenaphthene	570					l NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA	NA NA
Acenaphthylene	84 (b)					NA NA		NA .	NA NA	NA NA	NA NA	NA NA		NA NA		NA NA
Anthracene	12,000					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA
Benzo(a)anthracene	12,000		590			NA NA	NA NA	NA.					NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	8		59			NA NA	NA	NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	5		- SU			NA.	NA.	NA NA				NA NA	NA NA	NA.	NA.	NA NA
Benzo(g,h,i)perylene	84 (b)	BW1997429999999999	PR-1-93-120-12-120-120-120-12			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA
Benzo(k)fluctanthene	49		5900			NA NA	NA NA	NA.	NA NA	NA.	NA NA	NA NA	NA.	NA NA	NA.	NA I
bis(2-Ethylhexyl)phthalate	3600 (c)			**	LANGUE COMPONENT COM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthatate	930				College of	. NA	NA		NA."		NA	NA	NA =	NA NA		NA.
Carbazole	0.6	-				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	160		59,000			NA-	NA.	NA.	NA .	NA.	NA.	NA.	NA .	· · · · · · NA	NA.	NA
Dibenz(a,h)anthracene	2		59			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzoluran						NA NA	NA NA	NA NA	NA	N.A.	. NA	NA	NA NA	NA	NA.	NA
Diethylphthalate	3600 (c)					NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	3600 (c)					NA NA	NA .	NA NA	- NA	NA.	- NA	NA-	NA.	NA NA	NA:	NA.
Di-n-Butylphthalate	2300					NA	NA	NA NA	NA	NA.	NA	NA	NA	NA	NA	NA
Di-n-Ostyl phthalate	10,000					NA NA	NA =	NA NA	NA	- NA	NA	NA -	NA -	NA	NA -	NA.
Fluoranthene	4300					NA	NA	NA	NA	NA	NA	NA NA	NA	NA.	NA	NA.
Fluorene	560					NA	NA NA	NA :	NA NA	NA.	NA NA	NA NA	NA.		NA.	-NA
Hexachloroethane	0.5	enter transfer transfer street, street, and		mortzonacia estrutura	TOTAL COMPANY OF STREET VICTORIAN CO.	NA NA	NA NA	NA NA	NA	NA.	NA_	NA NA	NA.	NA	NA	NA
Indeno(1,2,3-cd)pyrene			590			NA	NA	NA.	NA	NA			NA .		NA NA	NA NA
Naphthalene	84	er / New Property All St. 105	20,000	A TENO-2017 Value Topological St	15	NA NA	NA_	NA NA	NA	NA NA	NA	NA	NA	NA	NA	NA
Pentach crophenol	0.03	-				NA NA	NA.		NA.		∴ NA	NA.	NA NA	NA. I		NA
Phenanthrene Pyrene	84 (b)				Mary Francisco	NA NA	NA NA	NANA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Pyrene	4200					NA.	NA NA	N.A.	NA	NA NA	NA.	NA NA	NA .	NAC NAC	THE WAR	NA .
SEMIVOLATILES (mg/kg)																
EPA Method SW8270SfM				l i												
Acenaphthene	570		<u></u>			2.24	1.14	0.399	0.00667 U	0.00667 U	0.00667 U	0.00667 U	0.513	0.953	1.52	0.00667 U
Acenaphthylene	84 (b)				i promovini i se	0.963	0.533	0.125	0.00667 U				0.157	0.353	0.47	0.00667 U
Anthracene	12,000					1.14	0.8	0.175	0.008	0.022	0.0107	0.0433	0.0947	0.17	0.309	0.00667 U
Benzo(a)anthracene	2		590	refres	40.40	0.0707	0.078	0.138	0.0167	0.0413	0.0213	0.115	0.0133	0.00933	0.0687	0.0147
Benzo(a)pyrene	8	GUED-GUARD VERNANDRIANO	59	enther-yaser-enth-west-was		0.0133	0.0493	0.132	0.0127	0.0313	0.02	0.101	0.00867	0.00667 U	0.0527	0.0127
Benzo(e)fluoranthene	5 6					0.0127	0.054	0.119	0.0127	0.0293	0.0173	0.0887	0.008	0.00667 U	0.05	0.0147
Benzo(g,h,i)perylene	84 (b)		-		-	0.01	0.024	0.056	0.00667 U	0.014	0.00933	0.0433	0.00667 U	0.00667 U	0.026	0.00733
Benzo(k)fluorenthene	49		5900			0.00667 U	0.0173	0.046	0.00667 U	0.0113	0.00733	0.04	0.00667 U	0.00667 U	0.0153	0.00867 U
Chrysene	160		59,000			0.0933	0.0813	0.136	0.014	0.0367	0.02	0.118 J	0.0113	0.012	0.064	0.014
Dibenz(a,b)anthracene.	2		59			0.00667.U	0.00667 U	0.016	0.00667 U			0.0133	0.00657 ⊎		0.00067 U	0.00667 U
Fluoranthene	4300				I	0.07	0.17	0.139	0.0293	0.0733	0.0307	0.169	0.026	0.0233	0.137	0.0227
Fluorene	560					5.95	4.06	0.813	0.00667 U			0.00667 U		2.11	2.84	0.00667 U
Indeno(1,2,3-cd)pyrene	14		590			0.00867	0.0207	0.0487	0.00667 U	0.012	0.008	0.038	0.00667 U	0.00667 U	0.0213	0.00667 U
Naphthalene	84		20,000			4.36	0.627	6.22	0.00667 U	0.00667 U		0.00667 U			0.983	0.00667 U
Phenanthrene	84 (b)					9.61	5.17	1.3	0.0327	0.0627	0.0213	0.136 J	1.17	1.88	2.76	0.0147
Pyrene	4200					1,25	0.443	0.255	0.038	0.0947	0.0413	0.233 J	0.0527	0.0493	0.24	0.0287
					I											
CHLORINATED PHENOLS (mg/kg	)			-	ļ											
Method 8040/8270SIM		[			i											
Pentachlorophenol	0.03			-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1		1	1	ļ	- 1											

TABLE C-1b Page 11 of 15

# SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						OF THE STATE	CF	CF CF	CF	CF	CF	CF	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · ·	CF	CF
Sample identification: Laboratory identification: Date Collected:	PRGs	Background	SCREENING CRITERIA Risk-Base Soil Ingestion, Dermal Contact, and Inhalation Excavation Worker	d Concentration Volatilization to Outdoor Air Occupational		LW19S (16.5-17.5) 0309195-01 9/29/2003	LW20D (12-13) 0310011-01 9/30/2003	LW21S (13.5-14.5) 0310149-03 10/21/2003	LW22D (24-25) 0309163-04 9/24/2003	LW23D (22.5-23.5) 0309163-03 9/24/2003	LW24D (26-27) 0310149-02 10/20/2003	LW25D (28-29) 0310149-01 10/20/2003	LW26D (15-16) 0309185-01 9/25/2003	LW27S (13.5-14.5) 0309185-02 9/25/2003	LW27S (21-22) 0309185-03 9/25/2003	LW35D (27-28) 0310011-02 10/1/2003
VOLATILES (mg/kg)	DAI -EU	1	North	Особранона	Occupational	SIZAIZOOS	2/00/2000	10/2 1/2000	3/24/2000	3/24/2000	10/20/2000	10/20/2000	3/ES/EU00	3/23/2003	SIESIEOUG	10/1/2000
EPA Method SW8260 1,2,4-Trimethylbenzene			40,000	790	55	0.01 U	0.01 U.		NA .	NA NA	0.01 U	0.01 UJ		0.0156 J	0.0129 J	0.01 U
1,2-Dibromoethane 1,3,5-Trimethylbenzene			7.1 40,000	12	0.000059 12	0,01 U 0.01 U	0.01 Ú. 1.11 J	0.1 U 6.83 J		0.01 NA	U 0.01 U 0.01 U	0.01 UJ	1.04 J	0,01 U 0.832 J	0.01 U 1.05 J	0.01, U 0.01 U
2-Butanone						NA .		NA NA	NA.		NA.			, NA	NA	NA NA
4-Isopropyltoluene Acetone	12 (a) 16					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA
Benzene Carbon Distilfide	0.03 32		9400	48	0.052	0.01 U NA	0.01 U. NA	0.254]J NA	NA NA	NA NA	0.01 U NA	0.01 UJ NA		0.01 U NA	0.01 U NA	0.01 U NA
Ethylbenzene	13		-			0.01 ∪	0.01 Uu	16.5 J	NA	NA	0.01 U	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U
Isopropylbenzene m.p-Xylene	210 (g)		<b>.</b>			2.05 J 0.02 U	1.16 J 0.02 UJ	7.88 J 68.8 J	NA NA	NA NA	0.01 U 0.02 U	0:01.UJ 0:02.UJ		0.835 J 0.0382	1.11 J 0.02 U	- 0.01 U 0.02 U
Methyl lodide						". "NA .:	NA -	NA_	NA.	NA.	NA NA	NA.	N NA	_ NA	NA	NA NA
Methyl tert-butyl ether Naphthaiene	84		20,000	720	0.30	10 U NA	10 UJ NA			10 L NA	J 10 U NA	10 UJ NA	10 U NA	10 U NA	10 U NA	10 U NA
n-Butylbenzene					-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene o-Xylene	210 (g)	-			100 (g)	4.9 J 0.01 U	2.52 J 0.042 J	17.8 J 16.2 J	NA NA	NA NA	0.01 U 0.01 U	0.01 UJ 0.01 UJ		<b>1.17.</b> J 0.01 U	1,26 J 0.01 U	0 01 U 0.01 U
sec Butylbenzene	rvaled					NA 🧀	NA NA	NA. NA	NA:	NA NA	NA NA	NA NA	NA NA	NA NA	NA .	NA.
tert-Butylbenzene Tolluene	12				180	0.01 U				NA NA			0.0299 J		NA 0.0183 J	NA 0.01 U <sub>e</sub> )
HYDROCARBONS (mg/kg)																
NWTPH-HCID																
Gasoline				80,000	110	NA	NANA	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Kerosene Diesel			-		-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Lube Off						NA .	NA.		NA	, NA	NA:	NA	NA	NA	NA	
NWTPH-Dx (mg/kg)						36100 J	13700 J	6290 J	40.011	40.04	20.2	18.7 U	40500	annal :	9790 J	16.5 U
TPH-Diesel Range TPH-Kerosene Range						36100JJ		NA 6290]J	16.6 U	16.6 U NA	NA NA	NA.	12500 J NA	9000 J NA		16.5 U NA
TPH-Motor Oil Range	-	-				63.8 U	611 U	642 U	55.2 U	55.3 U	J 64.4 U	62.4 U	64.5 U	59.5 U	56.9 U	54.9 U
NWTPH-G (mg/kg) TPH-Gasoline Range				80,000	110	2310	2310	8920 J	2.76 U	2.76 U	J 3.22 U	3.12 U	2270 J	4190 J	5010 J	12.7
	-	-	-	80,000	'''	2310	2310	63203	2.70 0	2.70 0	3.22.0	3.12 0	2270	4130]0	3010	12.7
PRIORITY POLLUTANT METALS (mg/kg)																
Arsenic (7060)	29	5 (j)			-	NA NA	NA	NA NA	NA Wa	NA	NA	NA	NA	NA NA	NA	NA
Chromiam (6010) Copper (6010)	38	29.1 19.1			-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA. NA	NA NA	NA NA	NA NA	NA NA
Lead (7421)		9	750		30	2.28 U	2 44 U	1,61 U	4,49 J	1.92 U NA		1.79 U	1.85 U	1.72 U-	1.72 U	92 U
Nickel (6010) Zinc (6010)	130 12,000	21.4 60.2				NA N <b>A</b>	147	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Cadmium (6010)	8					NA	NA.	NA.	NA	NA	NA.	NA	NA	NA NA	NA	NA
Mercury (7471)	ila					NA NA	NA NA	NA II		NA NA	NA NA	NA NA	NA NA	NA NA		NA NA
i	!	ļ l	1	l												

# TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF-	CF	CF	CF	CF	CF	CF: 15	CF 11	CF	CF	CF · : ··
-		-	SCREENING CRITERIA													
•			Risk-Base	d Concentration	s	1										
			Soil Ingestion, Dermal	Volatilization to		1										
			Contact, and Inhalation	Outdoor Air	Groundwater	LW19S (16.5-17.5)	LW20D (12-13)	LW21S (13.5-14.5)	LW22D (24-25)	LW23D (22.5-23.5)	LW24D (26-27)	LW25D (28-29)	LW26D (15-16)	LW27S (13.5-14.5)		LW35D (27-28)
Laboratory Identification:	PRGs	Background	Excavation			0309195-01	0310011-01	0310149-03	0309163-04	0309163-03	0310149-02	0310149-01	0309185-01	0309185-02	0309185-03	0310011-02
Date Collected:	DAF=20		Worker	Occupational	Occupational	9/29/2003	9/30/2003	10/21/2003	9/24/2003	9/24/2003	10/20/2003	10/20/2003	9/25/2003	9/25/2003	9/25/2003	10/1/2003
BETX (mg/kg)																
EPA Method SW8021B																
Benzene	0.03		9400	48	0.052	NA.	NA	NA	0.0276 U	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	13			TENER DE L		NA.	NA NA	NA NA	0.11 U	NA.	NA NA	NA.	NA NA	NA NA	NA 15	NA NA
Toluene	12				180	NA NA	NA	NA	0.11 U	NA	NA	NA	NA	NA	NA	NA
Xytenes, Total	210				100	NA I	NA	NA NA	0.331 U	NA NA	NA.	NA.	, NA	NA =	NA	NA.
m,p-Xylene	210 (g)					NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m.p-Xylene o-Xylene	210 (g)				100 (g)	NA -	NA NA	NA .	NA NA	NA NA	NA NA	NA:	NA	NA.	NA 1	NA
DIOXINS AND FURANS (ng/kg)				i												
Total TEQ	-					NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 12 of 15

TABLE C-1b Page 13 of 15

# TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF	· ···CF	CF	CF	CF	CF	CF I
			SCREENING CRITERIA			ļ							
				d Concentration									
Sample Identification:	EPA Region 9	l	Soil Ingestion, Dermal Contact, and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	LW35D (29-29.5)	LW35D (30-31)	LW36D (7-8)	LW37D (6-7)	LW38D (7-8)	LWIGOD /s o) I	-W40\$ (21-21.5)	LIMAED (07.00)
Laboratory Identification:	PRGs	Background	Excavation	Outdoor Air	Groundwater	0310011-03	0310011-04	0411033-04	0411033-05	0411033-06	0411033-07	0411033-02	0411033-03
Date Collected:	DAF=20	Background	Worker	Occupational	Occupational	10/1/2003	10/1/2003	11/2/2004	11/2/2004	11/2/2004	11/3/2004	11/1/2004	11/1/2004
SEMIVOLATILES (mg/kg) EPA Method SW8270						i							
2,6-Dinitrotoluene	0.0007		]		ł	NA NA	NA	0.333 U	0.333 U	0.333 U	0.333 L	0.333 U	0.333 U
2-Methylnaphthalene	84 (b)					NA NA	NA NA	0.0667 U	0.0667 U				0.0867 U
Acenaphthene	570			Section with the section in		NA NA	NA NA	0.0667 U	0.0667 U	0.0667 U	0.0667 L		0.0667 U
Acenaphthylene	84 (b)				5/提勒普里	NA NA	NA.	0.0667 U	0 0667 LI			0.0667 U	0.0667 U
Anthracene	12,000					NA NA	NA	0.0667 U	0.0667 U		0.355	0.0667 U	0.0667 U
Benzo(a)anthracene	2		590		420 420 40	NA.	NA.	0.0667 U	0.0667 U			0.0667 U	0.0667 U
Benzo(a)pyrene	8		59		National	NA.	NA	0.0667 U	0.0667 U	0.0667 U	0.585	0.0667 U	0.0667 U
Benzo(b)flugranthene	5	X (1.24 M)				NA 2	NA NA	0 0667 U	0.0867 J	0.0667 U	0.517	0.0667 U	U:0667 U
Benzo(g,h,i)perylene	84 (b)					NA	NA	0.0667 U	0.0667 U	0.0667 U	0.157	0.0667 U	0.0667 U
Benzo(k)flunranthene	49		5900.			- NA	NA.	0 0667 U					0.0667.1.
bis(2-Ethylhexyl)phthalate	3600 (c)					NA.	NA	0.0667 U	0.0667 U	0.0667 U	0.0667 ∪		0.0667 U
Burylbenzylphthalate	930					NA.	NA NA	0.0667 U	0.0667 U	0.0667 U	0.0667. U	0.0667 U	0.0867 U
Carbazole	0.6	-				NA NA	NA	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U
Chrysene	160		59.000			NA NA	NA.	0.0667 U	0.0667 U	0.0667 U	0.655	0.0667 U	0.0667 U
Dibenz(a,h)anthracene	2		59	-	-	NA	NA	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U
Dibenzofuran						NA NA	NA NA	0.0667 U	0 0667 U				0.0667 U
Diethylphthalate	3600 (c)	w				NA NA	NA.	0.0667 U	0.0667 U	0.0667 U	0.0667 U		0.0667 U
Dimethylphthalate	3600 (c)					NA NA	NA	0.0667 U	0.0667 ປ	0:0667 U			0.0667 U
Di-n-Butylphthalate	2300				Devices BALD of Labour Sweets	NA NA	NA NA	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U
Di-n-Octyl phthafate	10,000					NA NA	NA.	0.0667 U	0.0667-U		0.0667 U		0.0667 J
Fluoranthene	4300					NA	NA NA	0.0667 U	0.0667 U	0.0667 U	0.775	0.0667 U	0.0667 U
Fluorene	560		-			NA	NA NA	0.0667 U	0.0667 U				0.0667 U
Hexachloroethane	0.5	NAMES OF THE PARTY				NA	NA.	0.133 U	0.133 U	0.133 U	0.133 U		0.133 U
indeno(1,2,3-od)pyrene	14						NA	0.0667 U	0.0667 U				0.0667 U
Naphthalene	84	TABLET SHAPE AND THE STORY	20,000		15	NA	NA	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U	0.0667 U
Pentachlorophenol						NA NA	NA NA	0.333 U	0,333 U				0.933 U
Phenanthrene	84 (b)	#79.6879A-671-6851-086				NA	NA	0.0667 U	0.0667 U	0.0667 U	0.674	0.0667 U	0.0667 U
Pyrene	4200					NA NA	NA	0.0667 U	0.0667 U	6:0667 Q	1.09	0.0667-0	0.0667 U
SEMIVOLATILES (mg/kg)													
EPA Method SW8270SIM			·										i
Acenaphthene	570	-				0.00667 U	0.0107	NA NA	NA	NA NA	NA	NA NA	NA
Acenaphthylene =	84 (6)		- 1 / <del>4</del> 2			0.01	0.0433	NA NA	NA NA	NA NA	NA NA	NA	NA_
Anthracene	12,000		CHALLEST COLUMN ON A			0.036	0.078	NA	NA	NA	NA	NA NA	NA NA
Benzo(a)anthracene		CONTRACTOR NO NELLENGE AND ADDRESS OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF T	590			0.0487	0.104	NA II		NA			NA II
Benzo(a)pyrene	8		59			0.0493 0.04	0.115	NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(b)fluoranthene	5			The second second second			0.094	NA					NA
Benzo(g,h,i)perylene	84 (b)					0.0233	0.0667	NA NA	NA.	NA NA	NA .	NA NA	NA NA
Benzo(k)fluoranthene	49 160		5900 59.000			0.0147 0.0433	0.03 0.0913	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	160		59,000 59		- 57 - 57 /4	0.0433 0.00667-U	0.0913	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene Fluoranthene	4300				· 网络沙兰西亚	0.078	0.0113	NA NA	NA NA	NA NA	NA:	NA NA	NA NA
Fluorene	4300					0.076 0.00667 U	0.0207	NA NA	NA NA	NA NA	NA NA		NA NA
indeno(1,2,3-cd)pyrene	14		590	THE PERSON NAMED IN		0.0193	0.0207	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	84		20,000			0.00667 U	0.0493	NA NA	NA NA	NA NA	NA NA	NA .	NA.
Phenanthrene	84 (b)			THE RESERVE AND ADDRESS.	CONTRACTOR OF THE PARTY OF THE	0.0447	0.161	NA NA	NA	NA	NA	NA	NA NA
Pyrerie	4200					0.107	0.101	NA NA	NA	NA NA	NA.	NA NA	NA .
-91000						M. C. C.			C. C.			330	
CHLORINATED PHENOLS (mg/kg)	, ,												i
Method 8040/8270SIM	′ l	Į	i	i	Į.								
Pentachlorophenol	0.03	[			(	NA	NA	NA	NA	NA	NA	NA	NA
				ļ							*		
,		,											

Page 14 of 15

### TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						OF	CF	CF	CF	CF	CF	CF	CF
-			SCREENING CRITERIA										
-				d Concentration	s								
			Soil Ingestion, Dermal	Volatilization to	Leaching to								
Sample (dentification: Laboratory (dentification:	EPA Region 9 PRGs	Background	Contact, and Inhalation Excavation	Outdoor Air	Groundwater	LW35D (29-29.5) 0310011-03	LW35D (30-31) 0310011-04	LW36D (7-8) 0411033-04	LW37D (6-7) 0411033-05	LW38D (7-8) 0411033-06	LW39D (5-6) 0411033-07	LW40S (21-21.5) 0411033-02	LW45D (27-28) 0411033-03
Date Collected:	DAF=20	background	Worker	Occupational	Occupational	10/1/2003	10/1/2003	11/2/2004	11/2/2004	11/2/2004	11/3/2004	11/1/2004	11/1/2004
VOLATILES (mg/kg)	Brit -20		Tronco.	Сосаранона	Coonpanional	10/112000	10/1/2000	11122001	17/2/2001	7772001	111012001	117174001	117.12001
EPA Method SW8260		İ											
1,2,4-Trimethylbenzene			40,000	790	55	0.01 U	0.01 U	NA	NA.	NA	NA	NA	NA
1,2-Dibromoethane			7.1		0.000059	0.01 U	0.01 U	NA NA		NA NA	NA.	NA NA	NA NA
1,3,5-Trimethylbenzene	_		40,000	-	12	0.01 U	0.01 U	NA	NA	NA	NA	NA	NA
2-Butanone						NA.	NA.	NA .	NA		NA NA	NA .	NA I
4-Isopropyltoluene	12 (a)	TURBAL SWALL SWALLSWALL				NA	NA	NA	NA	NA	NA	NA	NA
Acetone Benzene	16 0.03		9400	48	0.052	NA 0.01 U	NA 0.01 U	NA NA	NA <sup>®</sup> NA	NA NA	NA NA	NA ®	NA NA
Carbon Disulfide	0.03 32		9400	48	0.052	NA				NA NA	NA NA		NA NA
Ethylbenzene	13	territoristic and test				0.01 U	0.01 U	NA	NA	NA NA	NA NA	NA	NA NA
Isopronybenzene							0.01 U		NA NA	NA NA	NA NA	NA NA	NA
m,p-Xylene	210 (g)		The state of the s	STORE TO A STORE A TO A STORE		0.02 U	0.02 U	NA	NA	NA	NA	NA	NA
Methyl lodide						NA	NA.	NA NA	NA NA	NA NA	NA NA	- NA	NA III
Methyl tert-butyl ether Naphthalene	843		20.000	720	0.30	10 U	10 U NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA
n-Butylbenzene	9 54		20,000	-	15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
n-Propylbenzene						0.01 U	0.01 U			NA.		NA NA	
o-Xvlene	210 (g)	PROPERTY AND ADDRESS OF			100 (g)	0.01 U	0.01 U	NA	NA	NA	NA	NA	NA
sec-Butyibonzene						NA.	NA NA	NA.	NA NA	NA	NA.	NA	NA NA
tert-Butylbenzene	-					NA.	NA NA	NA.	NA	NA	NA_	NA.	NA NA
Toluene	12			itale.	180	-0.01 U	0.01 U	NA	NA.	NA.	NA.	NA	NA
HYDROCARBONS (mg/kg)													
NWTPH-HCID													
Gasoline				80,000	110	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Kerosene Diesel						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Lube Oil		Marie Co.				NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA *
18 22 10 10 10 10 10 10 10 10 10 10 10 10 10		(CASTAN BACKET			PROCESS TO SERVICE STATE OF CASE		CESTS IN SEC. MAP WAY	" Anald " on " course " on " formitte					
NWTPH-Dx (mg/kg) TPH-Diesel Range	_					19.7 ∪	44.3	18.8 U	19.1 U	19.5 U	20.2 U	17.4 U	19 U
TPN-Keresene Range						NA NA	44.3 NA	NA NA	NA.	19.5 U	20.2 U	17.4 U	NA S
TPH-Motor Oil Range						65.8 U	92.3	62.5 U	63.6 U	64.9 U		57.9 U	63.2 U
Ť l				1									
NWTPH-G (mg/kg) TPH-Gasoline Range				80.000	110	7.28	5.07	3.12 ∪	3.18 U	3.24 U	3.36 ∪	2.89 U	3.16 U
IT IT dasonile hange		-	-	30,000	''"	7.20	3.01	3.12 0	5.10 0	0.24 0	5.50 0	2.03 0	5.100
PRIORITY POLLUTANT		1	I		l								
METALS (mg/kg)	1		ļ										
Arsenic (7060)	29	5 (j)		-		NA	NA	1.75 U	1.59 U	1.69 U			1.59 U
Chromium (6010)	38	20.1	AND THE RESERVE OF THE PARTY OF			NA	NA NA	13.5	11.9		11.8	12.8	
Copper (6010) Eead (7421)	 	19.1	750		30	NA 2,63 U	NA 4,38	11.3 1.75 U	10.4 1.59 U	10.2 1.69 U	9.97 1.52 U	12.3 1.61:U	11.7 1.59 U
Lead (7421) Nickel (6010)	130	21.4				2,03-U	71.36 NA	13.4	12.1	13.4	14.4	14.5	16.1
Zinc (6010)	12.000	60.2				NA.	NA.	46.7	45.2	40.1	41.2	50	45.8
								Andready Co. P. S. Belleville Co. Co. Co. Co. Co. Co. Co. Co. Co. Co.	The second secon		The second second second	The second secon	
Cadmium (6010)	8		erromentary value 10. days a parameter a real	rest after the artificial fluid of the		NA NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)						NA	NA	NA NA	NA NA	, NA	- NA	NA NA	NA.
1	- 1	1	I	ı	Į								I

# TABLE C-1b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: MAIN TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF	CF	CF	CF.	CF	". "E **********************************	CF
•			SCREENING CRITERIA										
•			Risk-Base	d Concentration	s	1							
			Soil Ingestion, Dermal	Volatilization to	Leaching to								
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	LW35D (29-29.5)	LW35D (30-31)	LW36D (7-8)	LW37D (6-7)	LW38D (7-8)	LW39D (5-6)	LW40S (21-21.5)	LW45D (27-28)
Laboratory Identification:	PRGs	Background	Excavation			0310011-03	0310011-04	0411033-04	0411033-05	0411033-06	0411033-07	0411033-02	0411033-03
Date Collected:	DAF≃20		Worker	Occupational	Occupational	10/1/2003	10/1/2003	11/2/2004	11/2/2004	11/2/2004	11/3/2004	11/1/2004	11/1/2004
BETX (mg/kg) EPA Method SW8021B								_					
Benzene	0.03		9400	48	0.052	NA NA	NA	NA	NA	NA	NA	NA.	NA
Ethylbenzene	13				<b>数据:把热</b>	NA NA	NA.	NA NA	NA.	NA	NA.	NA	NA "
Toluene	12				180	NA.	NA.	NA	NA	NA	NA	NA	NA
Xylenes, Total	210				100	NA.	NA:	NA NA	NA.	NA.	NA	NA	. NA
m,p-Xylene	210 (g)		**			NA	NA	NA	NA	NA	NA	NA	NA
o Xylene	210 (g)				100 (g)	NA:	NA ·	NA NA	- NA	NA.	NA.	NA.	NA S
DIOXINS AND FURANS (ng/kg)													
Total TEQ						NA NA	NA NA	NA	NA.	NA	NA	NA.	NA

Page 15 of 15

Page 1 of 21

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												0-0.5	040,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
						SCREENING O	RITERIA						-						
			1			Concenting	T T	Risk-	Based Conce	ntrations		COMP	COMP	COMP	COMP	COMP	COMP	COMP	
	l									Volatifization to	Leaching to	1							
Sample Identification:	i						Soil Ingestion, D			Outdoor Air	Groundwater	G21 (0-0.5)	G22 (0-0.5)	G23 (0-0.5)	G24 (0-0.5)	G25 (0-0.5)	G26 (0-0.5)	G27 (0-0.5)	BT-01 (0-0.5)
Laboratory Identification:		on 9 PRGs		Oregon SL		Background	l	Construction	Excavation			0108208-18	0108215-05	0108215-01	0108208-06	0108215-09	0108215-13	0108208-10	0207040-01
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/29/2001	8/29/2001	8/28/2001	7/8/2002
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270			1				1												
2,6-Dinitrololuene 2-Methylnaphthalene	620 190 (b)	0.0007 84 (b)	200 (a)	1440 (a) = 3900 (b)		-		-		-		0.330 U = 0.067 U	0.330 U 0.067 U	0.330 U 0.067 U	0.330 U 0.067 U	0.330 U 0.067 U		0.330 U 0.067 U	
Acenachthene	29000	570	20	3800 (0)			41,000	16,000				0.067 U	0.067 U	0.067 U	0.067 U	0.067 U		0.067 0	NA NA
Acenachthylene	190 (b)	84 (b)	10 (b)	3900 (b)			71,000	.0,000				0.130	0.067 U	0.067 U	0.067 U			1,200	NA.
Anthracene	100,000	12,000	-					90,000	-			0.120	0.067 U	1.200	NA				
Benzo(a)anthracene	2.1	- 2 ·					2.7	21	590			0.320	0.096	0.220	0.067 U	0.480	0.067 U	6.900	NA.
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59			0.540	0.210	0.330	0.075	0.730	0.072	12.000	NA
Berizo(b)fluoranthene	2.1	5	10 mm						-			1.100	0.360	0.630	0.120	1.200	0.140	21,000	NA NA
Benzo(g,h,i)perylene Benzo(k)flugranthene	190 (b) 21	84 (b)	10 (b)	3900 (b)	USBTONE TO THE			210		-		0.770 0.340	0.260 0.110	0.220 0.190	0.067 U	0.860 0.410	0.067 U 0.067 U	12.000 3.100	NA
bis(2-Ethylhexyl)phthalate	120	49 3600 (c)		1020	of a se se s 4.5		44.00	410	0400			0.079	0.067 U	0.086	0.091	0.410 0.067 U	0.069	0.067 U	NA NA
Butylbenzylphthalate	100,000	930			I.5 (d)					W 134.2 T.		0.075 0.067 U		0.067 U	0.057 U			0.067 U	
Carbazole	86	0.6	**	-	THE RESIDENCE OF THE PARTY OF T		and the same of th					0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.150	NA
Chrysene	210	160		male in di			270	2100	59,000			0,360	0.130	0:250	0.067 U	0.540	0.067 U	7.500	NA.
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59			0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.390	NA
Dibenzofuran	.1600.											0.067 U		2.067 U	0.067 U			0.067 U	
Diethylphthalate	100,000	3600 (c)			.45 (e)	-						0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	
Dimethylphthalate Di-n-Butylphthalate	100,000 62,000	3600 (c) 2300	200 (e) 200		45 (e) 0.45							0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	NA NA
Din Celyl phthalate	25.000	10,000			.45 (e)							0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	
Fluoranthene	22,000	4300					29.000	8900		**		0.840	0,220	0.610	0.090	1,100	0.079	17.000	NA
Fluorene	26,000	560	<b>F</b>		- 30		35,000	12,000				0.067 U	0.067 U	0.067 U	0.067 U	0:067 U	0.067 U		NA .
Hexachloroethane	120	0.5										0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	NA
Indeno(1,2;3;cd)pyrene	2,1	14					2.7	21	590			0.540	0,180	0,180	0.067 U	0.580	0.067 U	8.700	NA .
Naphthalene	190	84	10	3900			770	710	20,000		15	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	NA
Pentachlorophehol Phenanthrene	9.0 190 (b)	.0.03 84 (b)	. 3		- 4							0.330 U 0.230	0.330 U 0.067 U	0.330 U 0.220	0.330 U 0.067 U	0.930 U 0.170	0.330 ⊍ 0.067 U	0.930 U 5.900	NA NA
Pyrene	29,000	4200					21.000	6700				0.230	0.260		0.087	1.300	0.080		NA NA
, year	- Levius					100000000000000000000000000000000000000	41,000				No. 1000 - No. 1000 N	0.010	0.200		, Linds	1.300	D.000		AND THE PERSON NAMED IN
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270SIM																			
Acenaphthene	29,000	570	20	The recommendation	CONTRACTOR OF THE PROPERTY OF	value and commence	41,000	16,000	eminuscribus nacionaux/	TO STATE OF THE PARTY OF THE PA		NA	NA NA	NA	NA	NA.	NA	NA NA	NA
Acenaphthylene	190 (b)	84 (b)		3900 (6)						e e e e e e e e e e e e e e e e e e e	10.475/00	NA _	NA	NA	NA.	INA!	NA	NA -	NA
Anthracene Benzo(a)anthracene	100,000 2.1	12,000 2					27	90,000 21	590		-250	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA 7
Benzo(a)pyrene	0.21	8	Parameter reserve	125		-	0.27	2.1	59	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	2.1	5 3		macon problem in through comm								NA.	NA NA	NA 8	NA NA	NA NA	NA.	NA NA	NA.
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)		+6u-6u-6-but-75-775-775-775			non Chiangia dalai di miningando		**	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	21	49					27	210	5900				NA NA		NA	. NA	NA	NA.	NA
Chrysene	210	160	HELLER LANGE AND			an and a second	270	2100	59,000	all report of the state of the		NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	0.21	2		and the same of th			0.27	21	59			NA	. NA	. NA	NA 1	, NA	NA.	NA .	NA.
Fluoranthene	22,000 26,000	4300 560			30		29,000 35,000	8900 12,000	 Na 1884 and A			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Eluorene Indeno(1,2,3-cd)pyrene	2.1	14					2.7	21	590		hannes of the state of	NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA
Naphthalene	190	84	10	3900			770	710			15	' NA	NA NA	NA NA	NA.	NA NA	NA.	NA.	
Phenanthrene	190 (b)	84 (b)	 2014 1000-2010-2011	**			78: 10:10:10:00:00:00:00:00:00:00:00:00:00:0	## PP 1886 SEE COOK SECOND	**			NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	29,000	4200	44				21,000	6700				NA	NA	NA.	NA NA	NA	NA.	NA.	NA
CHLORINATED PHENOLS (mg/kg	1)					l													
Method 8040/8270SIM Pentachlorophenol	9.0	0.03	3	30	4	1						NA	NA	NA	NA	NA	NA	NA	NA
Chagalloropherior	0.0	0.03	3	30	• 1	]				-	-	170	170	170	130	INO	INO	INA	INA
,		,				,				1									

# TABLE C-2a Page 2 of 21

# SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

													0+0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0,5	0-0.5	0-0.5
						•••	SCREENING C	RITERIA												
			1						Risk-	Based Conce			COMP	COMP	COMP	COMP	COMP	COMP	COMP	
Sample Identification:			1					Soil Ingestion, D	Dormal Contact	and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	G21 (0-0.5)	G22 (0-0.5)	G23 (0-0.5)	G24 (0-0.5)	G25 (0-0.5)	G26 (0-0.5)	G27 (0-0.5)	BT-01 (0-0.5)
Laboratory Identification:	EPA Regi	on 9 PRGs		Oregon	SLVs		Background	Gost ingestion, t	Construction	Excavation	Odidooi Aii	GIOGINAMATO	0108208-18	0108215-05	0108215-01	0108208-06	0108215-09	0108215-13	0108208-10	0207040-01
Date Collected:	Industrial	DAF=20	Plants	Mammals		Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/29/2001	8/29/2001	8/28/2001	7/8/2002
VOLATILES (mg/kg)																				
EPA Method SW8260																				
1,2,4-Trimethylbenzene	170			3300 (f)				1500	1400	40,000	790	55 0.000059	0.002 U	0.001 U 0.001 U	0.001 U -0.001 U	0.001 U 0.001 U	0.001 U	0.001 U 0.001 U	0.001 U 	
1,3,5-Trimethylbenzene	0.073 70			3300 (f)				0:033 1500	0.25 1400	7.1 40,000	17	12	0.001 U 0.002 U	0.001 U	0.001 U	0.001 U	0,001 U 0,001 U	0.001 U	0,001 U	
2-Butarone	110,000			2300 (I)		1 7		1500	1400	40,000	er statut der is		0.005 U							
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)									0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	NA
Acelone	54,000	16		1250									0.005 U							
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.002 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	NA NA
Carbon Disulfide Ethylbenzene	400	32 13		3300 (f)			-	74,000	28,000			-	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	NA NA
Isopropylbenzene	2000	10		3300 (f)				51,000	24,000		T. 81 90 5		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)	-		-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0,002 U	NA
Methyl lodide													-0.020 Ü	0.001 U	0.020 ∪					NA
Methyl tert-butyl ether	70 190		1988/1595/2	- 6900			-	760 770	9000 710	20.000	720	0.30 15	NA 0.020 U	NA 0.010 U	NA 0 010 U	NA 0.010 U	NA 0.010 U	NA 0.010 U	NA 0.010 U	NA NA
Naphthalene n-Butylbenzene	190 240	84	10	3300 (f)				770	/10	20,000		15	0.004 U	0.010 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA NA
n-Propylbenzene	240			3300 (1)				19,000	9300		- W		0.002 U						0.001 U	NA
o-Xylene	420 (g)	210 (g)	1	-		-		24,000 (g)	19,000 (g)			100 (g)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	NA
sec-Butylbenzene	220			3300 (f)				S - 17 - 1					0.002 U		0.001 U			0,001 U	0.001 U	NA.
tert-Butylbenzene Toluene	390 520	12		3300 (f)		SUSSECULARIES CONTROL		G8.000	39.000			180	0.002 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U	0.001 U	0.001 U	NA NA
roluene	520	12	200	1440		. 10 m		U5.00U	CONTAIN.			100	U DOLL D	0.001-0	0.001-0-	0.001 0	0.001.0		- GOOL O	TAN-
HYDROCARBONS (mg/kg)																				
NWTPH-HCID											!									
Gasoline								22,000	13,000		80.000	110	21.7 U	22.7 U	21.3 U	22.0 U	22.2 U	22.5 U	21.7 U	21.7 U
Kerosene		er tritage											54.3 U	- 56.8 U	53.2 U	54,9 U	55.6 U	56,2 U	54.3 U	54.3 U
Diesel								70,000	23,000				54.3 U	56.8 U	53.2 U	Diesel	55.6 U	56.2 U	Diesel	54.3 U
Lube Oil	esti <del>s</del> All i												Lube Oil	114 U	108 U	110 U	111 U	112 U	Lube Oil	109 U
NWTPH-Dx (mg/kg)																				
TPH-Diesel Range		**				METSHERT MAN-		70,000	23,000				41.8	NA	NA	859 J	NA	NA	368 J	NA
TRH-Kerosene Range						F BANG							NA 127	NA NA	NA NA	NA 126 J	NA NA	NA NA	NA 695 J	NA NA
TPH-Motor Oil Range			-	-								- 1	127	NA.	INA	120 3	NA.	INA	093.0	INA
NWTPH-G (mg/kg)																		NA	NA	
TPH-Gasoline Range				-	-		**	22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT												ŀ								
METALS (mg/kg)																				
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i)	60 (i)	5 (j)						3.00	4.90	5.09	2.18	2.25	1,96	3.60	NA NA
Chromium (6010)	450	==:38==:		340,000 (k)			23.1						138	23.7	121	22.0	41.4	83.6	85.7	NA NA
Copper (6010)	41,000		100	390	190	50	19.1	750	 750	760		30	34.8 83.8	20.7	156 249	63.5 43.2	15.2 8.00	33.2 28.6	90.5	NA NA
Lead (7421) Nickel (6010)	20.000	130	50 30	4000 625	1 <b>6</b> 320	500 200	9 21.4	75U	750	750		30	106	196 16.5	49.3	21.3	8.00 23,1	36.2	32.3	NA NA
Nickel (6010) Zinc (6010)	100,000	12,000	50 (h)	20,000		200	50.2						133	104	181	135	60.1	71.3		NA NA
	W-18-8-18-8-1			- THE PARTY OF THE	r-453-1026-03				Harris of the state of the stat			- Seek (Call)				The second second	4-14-12-12-12-12-12-12-12-12-12-12-12-12-12-			A STATE OF THE PARTY OF THE PAR
Cadmium (6010)	450	8	4	125	6	20			teriorianistratura	-			NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)	310		0.3	73	1.5=	0.1			<b>化学业</b>				NA NA	, NA	. NA	NA	NA	NA	NA -	NA.
1		ı	l			[					1	J								

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# ABLE C-2a Page 3 of 21

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

													0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
	[						SCREENING (	RITERIA											•	
									Risk-	Based Concer	trations		COMP	COMP	COMP	COMP	COMP	COMP	COMP	
							İ				Volatilization to									
Sample Identification:				_				Soil ingestion, I			Outdoor Air	Groundwater	G21 (0-0.5)	G22 (0-0.5)	G23 (0-0.5)	G24 (0-0.5)	G25 (0-0.5)	G26 (0-0.5)	G27 (0-0.5)	BT-01 (0-0.5)
Laboratory Identification:		on 9 PRGs	ļ	Oregon			Background		Construction	Excavation			0108208-18	0108215-05	0108215-01	0108208-06	0108215-09	0108215-13	0108208-10	0207040-01
Date Collected:	Industrial	DAF=20	Plants	Mammais	Birds	Inverts	ļ <u>.</u>	Occupational	Worker	Worker	Occupational	Occupational	8/28/2001	B/29/2001	8/29/2001	8/28/2001	8/29/2001	8/29/2001	8/28/2001	7/8/2002
BETX (mg/kg)																				
EPA Method SW8021B																				
Benzene	1.4	0.03		3300	-			34	340	9400	48	0.052	NA NA	NA	NA	NA	NA	NA	NA	NANA
Efhylbenzene	400	-13		3300 (f)		-		74,000	28,000				NA		NA_	NA	NA.	NA.	NA NA	- NA -
Toluene	520	12	200	1440				68,000	39,000			180	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA
Xyleries Total	420	210 **					0.00	24,000	19,600		12.2 <b>*</b> 2.22	100	NA		NA.		NA	NA .	whose more since middle of the rate	British Stranger
m,p-Xylene	420 (g)	210 (g)		-				24,000 (g)	19,000 (g)			~	NA	NA	NA	NA.	NA	NA.	NA	NA
o-Xylene	420 (g)	210 (g)			-27			24,000 (g)	19,600 (g)			100 (g)	NA	NA .	NA NA	NA.	NA.	NA.	NA	NA
DIOXINS AND FURANS (ng/kg)																				
Total TEQ				-				I				- 1	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2a Page 4 of 21

TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												0-0.5	0-0.5	0-0.5	0=0.5	0-0.5	0-0.5	0-0.5
						SCREENING C	RITERIA					<u> </u>				·		
								Risk	Based Conce			1						
Sample Identification: Laboratory Identification:	EPA Region 9	PRGs		Oregon SI	LVs	Background	Soil Ingestion, I	Dermal Contact Construction		Volatilization to Outdoor Air	Leaching to Groundwater	BT-02 (0-0.5) 0207040-08	BT-03 (0-0.5) 0207040-13	BT-11(0-0.5) Dup of BT-03 (0-0.5) 0207040-06	BT-04 (0-0.5) 0207059-18	BT-05 (0-0.5) 0207040-17	BT-06 (0-0.5) 0207059-13	BT-13 (0-0.5) Dup of BT-06 (0-0.5) 0207059-11
Date Collected:	Industrial C	DAF=20	Plants	Mammals	Birds Invert	5	Occupational	Warker	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/8/2002	7/9/2002	7/9/2002
SEMIVOLATILES (mg/kg) EPA Method SW8270																		
2,6-Dinitrotoluene	620 (	0.0007	200 (a)	1440 (a)								NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	=190 (b)	84 (b)	10 (b)	3900 (b)		70 - 3						NA.		NA	NA NA	NA NA	NA.	NA -
Acenaphthene	29000	570	20		-		41,000	16,000				NA	NA	NA NA	NA	NA NA	NA	NA
Acenaphthylene		84 (b)		3900 (b)	71.7							NA.	NA NA	NA	. NA	NA .	NA.	NA.
Anthracene		12,000		CONTRACTOR O			AND THE LOW RESIDENCE OF THE PARTY OF THE PA	90,000		-		NA	NA NA	NA NA	NA	NA	NA.	NA
Benzo(a)anthracene	0.21	2 8		125			2.7 0.27	21 2.1	590 59			NA NA	NA NA	NA NA	NA NA	NA. NA	NA NA	NA NA
Benzo(a)pyrene Benzo(b)filioranthene	2.1	5	E1-482 160		- 12-7-8-8-8-		0.27	د. ا پر	39	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene		84 (b)	10 (b)	3900 (b)								NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA
Benzo(k)fluoranthene		49		2000 (D)			27	210	5900	500000000	100100000	NA NA	NA.	NA NA	NA NA			
bis(2-Ethylhexyl)phthaiate		600 (c)	-	1020	4.5			tomaricular cultipolitics of	LISEPRILLEY CLEEN TO CLEY YOURS			NA NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	100,000	930		1020 (d)	4.5 (d)							NA.		E ENA	::::::NÀ::::	NA .	NA.	NA NA
Carbazole	86	0.6									~-	NA	NA	NA	NA	NA	NA	NA
Chrysene	210	160					270	2100	59,000	a distributed backs	20 E F10 18	NA NA	NA.		NA =	NA NA	NA .	NA NA
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59			NA.	NA NA	NA NA	NA NA	NA	NA NA	NA
Dibenzofuran	1600			0.002								NA =	NA	NA	NA NA	NA I		NA NA
Diethylphthalate Dimethylphthalate		600 (c)			l.45 (e)							NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Di-n-Butylphthalate		600 (c) 2300	200 (e) 200		.45 (e) 0.45							NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Di-n-Octy phthalate		0.000		30,000 (e) <b>0</b>			_	40 VB 12 F 18 V				NA NA	NA NA	NA NA	NA NA	NA NA		
Fluoranthene		4300	ACD (II)	ou.wo (c) •	.nv (e)		29,000	8900		65-869-985421-97-M	2007-0992-098	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA
Fluorene		560			30		35,000	12,000				NA NA	NA NA	NA NA	NA NA	NA.	NA	
Hexachloroethane	120	0.5	2178882-5:3879121VB									NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene.	2.1	14					2.7	21	590			NA.	NA NA	NA NA	NA NA	NA.	" NA"	. NA
Naphthalene	190	84	10	3900			770	710	20,000		15	NA	NA	NA	NA	NA NA	NA NA	NA
Pentachiorophenoi	0.0	0.03	3.	30	4							NA.	NA	NA	NA.	NA NA	NA."	NA .
Phenanthrene		84 (b)	MILITERIAL PLANCES		and the second of the second o							NA	NA	NA	NA	NA	NA	NA NA
Pyrene	29,000	4200			.94		21,000	6700				NA .	NA NA	NA	NA	. NA	. NA	NA.
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM											:							
Acenaphthene	29,000	570	20				41,000	16,000				NA	0.00667 UJ	NA	0.00667 UJ	NA	NA	NA
Acenaphthylene	190 (b) £	34 (b)	10 (b)	3900 (b)			40.00					NA.	0.00667 UJ	in a NA	0.00667_UJ	NA NA	NA NA	NA NA
Anthracene		2,000		*-	14 pt			90,000				NA_	0.00667 UJ	NA	0.00667 UJ	NA NA	NA	NA NA
Benzo(a)anthracene		2	- 0.30-4.26M-0.00.26				2.7	21	590			NA NA		NA .	0.022 J	- NA	NA NA	
Benzo(a)pyrene	0.21	8	DESTRUCTION STATES	125			0.27	2.1	59	E-1985 - 6251-70/ 985 - 686		NA	0.00667 UJ	NA NA	0.0367 J 0.044 J	NA	NA NA	NA NA
Benzo(b)fluoranthene		5	40.75	3900 (b)								NA NA	0.016 J 0.0333 J	NA NA	0.044 J 0.0447 J	NA NA	TNA NA	NA NA
Benzo(g,h,i)perylene Benzo(k)tluoranthene		34 (b) 49	10 (b)	3900 (b)		-	-27	210	5900			NA NA	0.00667 UJ	NA NA	0.0447 J	NA NA	NA NA	NA NA
Chrysene		160					270	2100	59,000		-	NA NA	0.00667 UJ	NA NA	0.0247 J	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59			NA	0.00667 UJ		0.0113 J	NA NA	NA NA	
Fluoranthene		4300		-		-	29,000	8900	- Committee of the control of the co			NA	0.00667 UJ	NA.	0.0333 ↓	NA	NA NA	NA
Fluorene		560			- 30		35,000	12,000	s side and an			NA NA	0.00667 UJ	NA NA	0.00667 UJ	NA.	NA	NA NA
Indeno(1,2,3-cd)pyrene	2.1	14					2.7	21	590			NA	0.0153 J	NA	0.036 J	NA	NA	NA
Naphthalene		84	10	3900	are days that have		770	710	20.000		15		0.00667 UJ	NA =	0.00667-UJ	NA	NA.	NA.
Phenanthrene	190 (b) 8	34 (b)	**			T 1		**	1			NA	0.00667 UJ	NA	0.0127 J	NA	NA	NA NA
Pyrene	29,000	1200					21,000	6700		46.46		,NA	# 0.00657 UJ	NA NA	0.0533 J	NA.	NA.	P NA
CHLORINATED PHENOLS (mg/kg Method 8040/8270SIM	)																	
Pentachlorophenol	9.0	0.03	3	30	4	-				-		NA	NA	NA	NA	NA	NA	NA

7/19/05 \\Edmdata\wproc\231\009132\Phi|| RI 071905\Phi|| RI 071905\Phi|| RI RP\_App C BTTF 0-3

**TABLE C-2a** Page 5 of 21

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

													0-0.5	0-0,5	0.05	0-0.5	0-0.5	0-0.5	0-0.5
							SCREENING C	RITERIA											
									Risk-	Based Concer	ntrations								
			i								Volatilization to				BT-11(0-0.5)				BT-13 (0-0.5)
Sample Identification:								Soil Ingestion, D			Outdoor Air	Groundwater	BT-02 (0-0.5)	BT-03 (0-0.5)	Dup of BT-03 (0-0.5)	BT-04 (0-0.5)	BT-05 (0-0.5)	BT-06 (0-0.5)	Dup of BT-06 (0-0.5)
Laboratory identification: Date Collected:	EPA Regio	DAF=20	Plants	Oregon Mammals		Inverts	Background	Occupational	Construction Worker	Excavation	0	0	0207040-08	0207040-13	0207040-06	0207059-18	0207040-17	0207059-13	0207059-11
	industriai	DAT=20	mants	Mammais	Birds	inverts		Occupational	vvorker	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/8/2002	7/9/2002	7/9/2002
VOLATILES (mg/kg) EPA Method SW8260																			
1,2,4-Trimethylbenzene	170	960000000000000000000000000000000000000		3300 (f)	- DRIE - ATLANDANCE OF	BORDS-COLDANDO		1500	1400	40,000	790	55	NA	NA	NA NA	NA	NA.	NANA	NA
1,2-Dibromoethane	0.073		1					0.033	0.25	71	1.7	0.000059	N.A	NA NA	NA	NA.	NA.	NA.	NA NA
1,3,5-Trimethylbenzene 2-Butanone	70 110,000			3300 (f)				1500	1400	40,000	 	12	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)									6 CB 45 (\$6 55 18	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acelone	54,000	16	2.00 (a)	1250									NA NA	NA NA	NA NA	NA NA	NA NA		NA NA
Senzene	1.4	0.03		3300	are the second			34	340	9400	48	0.052	NA NA	NA	NA	NA	NA NA	NA NA	NA NA
Carbon Disulfide	720	32						(A) 14. (B) (C)			Mary Males and		NA NA	NA NA	and the contract of the contra	NA NA	NA NA		NA NA
Ethylbenzene	400	13		3300 (f)				74,000	28,000	200-400-000-000			NA	NA	NA	NA	NA	NA	NA
tsopropylbenzene:	2000	-	THE E	3300 (f)				51;000	24 000		tari, si≜, si		NA NA	NA -	NA NA	NA NA	NA	NA	NA NA
m,p-Xylene	420 (g)	210 (g)	-	-	-			24,000 (g)	19,000 (g)				NA	NA NA	NA NA	NA	NA	NA	NA
Methyl lodige							10 A 10 A 10 A 10 A 10 A 10 A 10 A 10 A						. NA		. NA	NA.	NA .	NA:	NA NA
Methyl tert-butyl ether	70	CONTRACTOR SPINS	-					760	9000		720	0.30	NA	NA	NA NA	NA	NA NA	NA	NA NA
Naphthalene	190	84	10			THE DECK HOLDER		770	710	20,000	***	15	NA	NA.	NA	NA	NA		NA.
n-Butylbenzene n-Bropylbenzene	240 - 240		- Falles	3300 (f) 3300 (f)		149.50.56			9300			 	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA Para
o-Xylene	420 (a)	210 (a)		3300 (1)				24,000 (g)	19.000 (a)			100 (g)	INA NA	NA NA	NA NA	NA NA	NA NA	The second secon	NA NA
sec-Bitylbenzene	= 220	210 (9)		3300 (1)				24,000 (g)	15,000 (g)			100 (g)	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
tert-Butylbenzene	390		Tetal Savettiess	3300 (f)		-8000000-100100		**				-	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
Toluena	520	12	200				i na zasada	68,000	39.000			180		NA.	NA NA	NA NA	NA.	NA NA	NA NA
			Black Lin Table of Title	110000000000000000000000000000000000000			TOTAL SECTION SERVICES		The second	NATIONAL PROPERTY OF					94.7194009-48.24 0000 - 82.281 - 134124			otto are to the same	200 Se 44
HYDROCARBONS (mg/kg)																			
NWTPH-HCID																			
Gasoline				_				22,000	13,000		80,000	110	21.6 U	22 U	22,2 U	21.8 U	21.4 U	21.8 U	21.9 U
Kerosene		432							10,000				54 1 U		55.4 U	54.5 U	53.4 U	54.5 U	
Diesel		***			Sent Telegraphics			70,000	23,000		consistent in consistent consiste	**	54.1 U	Diesel	Diesel	Diesel	53.4 U	54.5 U	54.7 U
Lube Oil	1001-00-00-0											Part of the second	108 U		3110	Lube Oil	107 ⊎		109 U
NIMETON DO ( ( )																	10+41M+11+0000+11M-11M-11	PROTEIN CONTRACTOR OF THE PARTY OF	TO A SHARE THE PARTY OF THE PAR
NWTPH-Dx (mg/kg) TPH-Diesei Range								70,000	23.000				NA	244	237	198	NA		
TPH-Kerosene Bange					-	-		70,000	23,000		-#125 <u>- 1</u> 111-127	-	NA NA	NA NA	237 NA	I98 NA	NA NA	NA NA	NA NA
TPH-Motor Oil Range													NA NA	67.2	69.6	699	NA NA	NA NA	NA NA
										i				0.72	00.0	000	104	INO	110
NWTPH-G (mg/kg)										ľ									
TPH-Gasoline Range						-	-	22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT												i							
METALS (mg/kg)		Į				ı				ļ									
Arsenic (7060)	1.6 (h)	29	10 (1)	29 (i)	10 (i)	60 (i)	5 (j)						NA	NA	NA	NA	NA	NA.	NA
Chromium (6010)	450	38		340,000 (k)			23.1						NA /	NA NA	NA NA	NA NA	NA NA	NA NA	NA L
Copper (6010)	41,000		100	390	190	50	19.1						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Lead (7421)	800		50	4000		500	9	750	750	750	and the second second	30	NA -	NA NA	NA.	NA	NA NA	NA NA	NA D
Nickel (6010)	20,000	130	30	625	320	200	21.4					*-	NA	NA	NA	NA	NA	NA	NA
Zinc (6010)	100,000	12,000	50 (h)	20,000	60 (h)	200	60.2						NA	NA.	NA .	NA .		NA.	NA.
							· I												
Cadmium (6010)	450	8	4	125	6	20		-		7 TOOL O COOK 9 1 2 SEC. 17 - 17			NA	NA	NA	NA.	NA	NA	NA
Mercury (7471)	310		0.3	73	1.5	0.1				DE MENTE	1 a a		NA NA	NA NA	NA NA	NA .	NA NA	NA	NA #
		J					ļ			!	l	I							

# E C-2a Page 6 of 21

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

													0-0,5	0-0.5	0-0.5	0.0,5	0-0.5	0-0.5	0-0,5
							SCREENING C	RITERIA											-
			I						Risk-	Based Concer									
								1			Volatilization to				BT-11(0-0.5)				BT-13 (0-0.5)
Sample Identification:			ł					Soil Ingestion, I			Outdoor Air	Groundwater	BT-02 (0-0.5)	BT-03 (0-0.5)	Dup of BT-03 (0-0.5)	BT-04 (0-0.5)	BT-05 (0-0.5)	BT-06 (0-0.5)	Dup of BT-06 (0-0.5)
Laboratory Identification:		on 9 PRGs		Oregon			Background	l	Construction	Excavation		ا ، ، ، ا	0207040-08	0207040-13	0207040-06	0207059-18	0207040-17	0207059-13	0207059-11
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/8/2002	7/9/2002	7/9/2002
BETX (mg/kg)			ł					1											
EPA Method SW8021B																			
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	NA.	NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13		3300 (f)				74,000	28,000			10.0	= - = NA.	NA.	NA .	- NA	NA NA	NA.	NA NA
Toluene	520	12	200	1440				68,000	39,000			180	NA NA	NA	NA	NA	NA	NA	NA
Xylones, Total	420	210			·			24.000	19,000			100	: NA	NA NA	NA.	NA NA	NA	NA.	NA NA
m,p-Xylene	420 (g)	210 (g)	-		-			24,000 (g)	19,000 (g)				NA	NA	NA NA	NA	NA NA	NA	NA NA
o Xylene	420 (g)	210.(g)	1 1 2					24,000 (g)	19,000 (g)			100 (g)	NA NA	NA NA	NA	T NA	NA .	= NA	NA NA
DIOXINS AND FURANS (ng/kg) Total TEQ			4.										NA.	NA	NA	NA	NA	NA	NA

TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
						SCREENING C	RITERIA												· · · · · · · · · · · · · · · · · · ·
			1					Risk-	Based Concer	,	T		DT 40 (0.0 B)						
Sample Identification:			İ			l	Soil Ingestion.	Dermal Contact	and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	BT-07 (0-0.5)	BT-12 (0-0.5) Dup of BT-07 (0-0.5)	BT-08 (0-0.5)	BT-09 (0-0.5)	BT-10 (0-0.5)	G27-4 (0-0.5)	G27-5 (0-0.5)	LW41S (0-0.5)
Laboratory Identification:		ion 9 PRGs		Oregon SL		Background		Construction	Excavation			0207040-22	0207040-33	0207040-27	0207059-06	0207059-01	0309196-16	0309196-17	0410156-02
Date Collected:	Industrial	DAF=20	Plants	Mammals i	Birds Inverts	<u> </u>	Occupational	Worker	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	9/29/2003	9/29/2003	10/28/2004
SEMIVOLATILES (mg/kg) EPA Method SW8270																			
2.6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								NA.	NA	NA	NA	NA	NA	NA	0.333 U
2-Methylnaphthalene	190 (b)	84 (b)	10 (b)		,			15 / F-1				NA.	NA NA	NA.	NA NA		NA NA	NA -	0.0667 U
Acenaphthene	29000	570	20				41,000	16,000				NA NA	NA	NA	NA	NA	NA	NA	0.0667 U
Acenaphthylene Anthracene	190 (b) 100,000	84 (b) 12,000	10 (b)	3900 (b)				90.000				NA. NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	0.0667 U 0.0667 U
Benzola)anthracene	100,000	12,000					27	21	590	2.4 20.7 10.4		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	. NA	0.179
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59		-	NA	NA NA	NA NA	NA NA	NA NA	NA.	NA	0.269
Benzo(b)fluoranthene	2.1	5 5										NA NA	NA.	NA NA	- NA	NA-	NA NA	. NA	0.331
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b) <b>21</b>	84 (b) 49	10 (b)	3900 (b)			27	210	 5900			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.228 0.0957
bis(2-Ethylhexyl)phthalate	120	3600 (c)			4.5		-					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	0.0667 U
Bulylbenzylphthalate	100,000	930			5 (d)	-31.5	0.25		With the		deline di	NA:		NA		NA NA	NA NA	NA.	0.0667 U
Carbazole	86	0.6						Colour Many Change Colour Ch				NA	NA	NA	NA	NA	NA	NA	0.0667 U
Ohrysene Dibenz(a,h)anthracene	210 0.21	160 2					270 0.27	2100 2.1	59,000 59			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.211 0.0667 U
Dibenzefuran	1600	a É		0.002			0.27		Contractor and Contractor			= NA	NA NA		NA NA		NA NA	NA NA	0.0667 U
Diethylphthalate	100,000	3600 (c)	200 (e)		45 (e)		**			**	-	NA	NA	NA	NA	NA	NA	NA	0.0667 U
Dimethylphthelate	100,000	3600 (c)		30,000 (e) 0.			100					NA.	NA NA	NA.			NA	NA .	0.0667 U
Di-n-Butylphthalate	62,000	2300	200		0.45					- 		NA NA	NA NA	NA NA	NA	NA NA	NA	NA	0.0667 U
Di-n-Octyl phthalate Fluoranthene	25,000	10,000 4300	55(X)*(6)*	30,000 (e) :0.	45 (e)	-	29.000	8900			200	NA NA	NA NA	NA NA	NA NA	NA NA	NA. NA	NA NA	0.0667 U 0.399
Fluorene	26,000	560	<b>33</b> 500	Sex se			35,000	12,000				NA.	NA NA	NA NA	NA NA	NA.	N/A	INA NA	0.0667 U
Hexachlorcethane	120	0.5		***		-		-	-	_	-	NA	NA NA	NA	NA	NA	NA	NA	0.133 U
Indeno(1,2,3-od)pyrene	2.1	14				./	27.	21	590			NA.	NA NA	NA.	NA NA	NA .	NA.	NA	0.168
Naphthalene Pentachlorophenol	190	84 0.03	10	3900 30		<i>y</i>	770	710	20,000		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0667 U - 0.333 U =
Phenanthrene	190 (b)	84 (b)									-	NA	NA NA	NA	NA	NA	NA	NA	0.143
Pyrene	29,000	4200			4		21,000	6700				NA.	NA NA	NA.	NA NA	, NA	NA	- NA	0.58
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM Acenaphthene	20.000	570	20		_	_	41,000	16,000				NA	NA NA	0.00667 U	J NA	NA	0.0933	0.000	616
Acenaphthylenc	29,000 190 (6)	84 (b)		3900 (b)			41,000	16,000				NA NA	NA NA	0.00667 U		NA NA	1.06	0.008	NA NA
Anthracene	100,000	12,000	-					90,000				NA	NA	0.00667 U		NA	1.16	0.12	NA
Senzo(a)anthracene	2.1	2					2.7	21	590			NA.	NA-	0.0727 J		- NA	41.1	0.507	NA .
Benzo(a)pyrene	0.21 2.1	8	-	125			0.27	2.1	59		 10 (1 )	NA NA	NA NA	0.106 J 0.193 J	NA NA	NA NA	16.8	1.06	NA NA
Benzo(b)fluoranthene Benzo(g,h,i)perylene	190 (b)	5 84 (b)	10 (b)									NA NA	NA NA	0.094 J	NA	NA NA	6	0.837	NA NA
Benzo(k)fluoranthene	21	49					27	210	5900			NA NA	NA NA	0.0447 J		NA NA	5.95	0.688	NA .
Chrysene	210	160					270	2100	59,000			NA NA	NA	0.0873 J	NA	NA	12.3	0.787	NA
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59			NA NA	NA	0.0227 J			1,23	0.187	NA
Fluoranthene Fluorene	22,000 26,000	4300 560			- 30		29,000 35,000	8900 12,000		or or or or or	-	NA NA	NA NA	0.168 J 0.00667 U	NA NA	NA NA	23.5 0.178	1.28 -0.01	NA NA
Indeno(1,2,3-cd)pyrene	2.1	14					2.7	21	590		2 wile that the second	NA NA	NA NA	0.066 J	NA NA	NA	5.28	0.762	NA
Naphthalene	190	84	10				770	710			155	NA.	NA.	0.00667 U			0.127	0.068	NA.
Phenanthrene	190 (b)	84 (b)					- 04 000	6700				NA NA	NA NA	0.0433 J 0.177 J	NA	NA	6.23	0.285	NA NA
Pyrene	29,000	4200					21,000	6/UJ= ==				NA.	N/A	0.477	NA	NA -	34.1	2,27,	NA
CHLORINATED PHENOLS (mg/kg	)								f		İ								
Method 8040/8270SiM Pentachlorophenol	9.0	0.03	2	30	4	[						NA	NA	NA	NA	NA	NA	NA	NA
генаспоторпеног	9.0	0.03	٥	30	- "	-		-			_ i	INA	INA	N/A	INA	INA	NA	INA	INA

Page 7 of 21

Page 8 of 21

## TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

													0-0.5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
							SCREENING C	RITERIA				·								
							T	1	Risk-	Based Concer	ntrations	-	1							
i	i										Volatilization to	Leaching to	1	BT-12 (0-0.5)						
Sample Identification:	l			_				Soil Ingestion, C			Outdoor Air	Groundwater	BT-07 (0-0.5)	Dup of BT-07 (0-0.5)	BT-08 (0-0.5)	BT-09 (0-0.5)	BT-10 (0-0.5)	G27-4 (0-0.5)	G27-5 (0-0.5)	LW41S (0-0.5)
Laboratory Identification: Date Collected:	EPA Regio	DAF=20	Clanto	Oregon Mammals		Inverts	Background	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	0207040-22 7/8/2002	0207040-33 7/8/2002	0207040-27 7/8/2002	0207059-06 7/9/2002	0207059-01 7/9/2002	0309196-16 9/29/2003	0309196-17 9/29/2003	0410156-02 10/28/2004
	iridustriai	DAF=20	Flants	Wallithals	Dirus	iriverts		Оссирацинаг	worker	worker	Occupational	Cocupational	116/2002	77072002	77072002	11912002	77972002	9/29/2003	9/29/2003	10/28/2004
VOLATILES (mg/kg)	l																			
EPA Method SW8260 1.2.4-Trimethylbenzene	470			0000 /6				1500	1400	40,000	790	55	NA.	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	170 0.073	-		3300 (f)		-		0.033	0.25	40,000 7.1	17	0.000059	NA NA		NA NA			NA NA	NA NA	NA NA
1,3,5-Trimethylbenzene	70		-	3300 (f)			-	1500	1400	40,000		12	NA.	NA NA	NA	NA	NA	NA	NA NA	NA NA
2-Butanone	110,000												NA :	NA				NA	NA NA	NA NA
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)		was recommended to			**				NA	NA	NA	NA	NA	NA	NA	NA
Acetone	54,000	16	T As a	1250									NA.	NA NA	NA NA		NA.	NA NA	NA	_ NA .
Benzene	1.4	0.03		3300		**		34	340	9400	48	0.052	NA NA	NA	NA	NA	NA NA	NA	NA	NA NA
Carbon Disulfide	720	32		0000 (4)			- X	74,000	00.000				NA.	NA	, NA	NA NA	NA.	NA.	NA.	NA
Ethylbenzene Isopropylbenzene	400 <b>2000</b>	13		3300 (f)		-		74,000 51,000	28,000 24,000			-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
m,p-Xylene	420 (g)	210 (g)	-	- 3300 (I)				24,000 (g)	19,000 (g)		-	-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Methyl lodide	420 (g)	210(9)		2000	era e	- 141		24,000 (g)	10,000 (g)		a. Paris is		NA NA	NA NA		NA.	NA .		NA.	NA NA
Methyl terf-butyl ether	70						FS-396/-710/2000220002	760	9000		720	0.30	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	190	84	10	3900			4.4	770	710	20,000		15	NA NA	NA NA	NA	NA	NA NA	NA NA	NA,	NA
n-Butylbenzene	240			3300 (f)		THE STATE OF THE STATE OF	NEW HINGS AND ADDRESS OF THE PARTY OF THE PA						NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	240			3300 (f)				19,000	9300				NA.		NA.	NA.		NA.	i NA	
o-Xylene sec-Butylbenzene	420 (g) 220	210 (g)	1	 3300 m		TS:887364813		24,000 (g)	19,000 (g)		-	100 (g)	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
tert-Butylbenzene	390	His Will all Pa		3300 (f)									NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA
Foluene	520	12	200					68,000	39,000			180	NA NA	NA NA	NA.		NA NA	NA NA	NA.	ÑA
	monorated in our plant collects a	-horation and an article of	Mary Company				250,70,50, 610	7 BESS/FERWIJS 1201 BESS/FFT 120	and the second of the second of the	A CHARLES CAME AND A CHARLES						entracy reservation and				21122376483838342-1L100223
HYDROCARBONS (mg/kg)																				
NWTPH-HCID																				
Gasoline								22,000	13,000		80,000	110	21.9 U	22.2 U	21.8 t	J 21.6 U	22.0 U	NA	NA	NA
Kerosche													54.7 U	. 55.6 U	54.5 t				NA.	NA.
Diesel				COMPLICATION AND ADDRESS.	NAME OF THE OWNER, THE		-	70,000	23,000		W. TRESTANCIAN CONTRACTOR		54.7 U	55.6 U	Diesel	53.9 U	55.1 U	NA	NA	NA
Lube Oil					100								109 U	111 U	109 L	J108 U	110 U	NA .	NA .	NA
NWTPH-Dx (mg/kg)		1				- 1														
TPH-Diesel Range						- 1		70,000	23,000				NA	NA	93.4	NA	NA	NA	NA	16.4 U
TPri-Kerosene Bange								all in the s	En de la las				NA NA		NA.	NA .	NA NA	NA	NA.	NA.
TPH-Motor Oil Range		-	-					***	***				NA	NA	54.5 L	J NA	NA	NA	NA	63.3
NWTPH-G (mg/kg)						1				- 1										
TPH-Gasoline Range	-							22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	2.74 U
							l													
PRIORITY POLLUTANT											1	1								
METALS (mg/kg) Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i)	60 (i)	5 (i)			1			NA	NA	NA	NA	NA	NA	NA	1.52 U
Chromium (6010)	450	29	1.(h)(k)			34 (h) (k)	23.1						NA NA	NA	NA NA		NA NA	NA NA	NA NA	14.2
Copper (6010)	41.000	4.0000000000000000000000000000000000000	100	390	190	50	19.1	TO CONTACT OF COME				**	NA	NA NA	NA	NA	NA	NA NA	NA	23.9
Lead (7421)	800	APPELLE.	.50	4000	16	500	9	750	750	750		30	" NA	NA.	NA NA	- NA	NA.	NA.	NA NA	1:52 U
Nickel (6010)	20,000	130	30	625	320	200	21.4	-				]	NA	NA	NA	NA	NA	NA	NA	37.2
Zinc (6010)	100,000	12,000	50 (1)	20,000	60 (h)	200	60,2						NA -	NA	NA .	NA .	NA	NA.	NA	74
		_			_												***		• • •	
Cadmium (6010)	450 310	8	4 0.3	125	6 1.5	20 0.1	-	rasa ilangan	-				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Mercury (7471)	05-W-J-1U		U.J.	/0	1.0	J. 1					25 - 13 2 7 4 5 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		JAZA	- MA	- NA	, JVA	INA.	P.VI	INM	A PART OF THE PART
ı		,				,	,			Ī	'	ļ								

7/19/05 \Ledmdata\wprock231009\132\Phill RI 071905\Phill RI Rpt\_App C BTTF 0-3

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT)

PHASE III RI

													0-0,5	0-0.5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
						•	SCREENING C	RITERIA					· · · · · · · · · · · · · · · · · · ·							
									Risk-	Based Concer	ntrations		1							
											Volatilization to	Leaching to		BT-12 (0-0.5)						
Sample Identification:								Soil Ingestion, D			Outdoor Air	Groundwater	BT-07 (0-0.5)	Dup of BT-07 (0-0.5)	BT-08 (0-0.5)	BT-09 (0-0.5)	BT-10 (0-0.5)	G27-4 (0-0.5)	G27-5 (0-0.5)	LW41S (0-0.5)
Laboratory Identification:		on 9 PRGs		Oregon			Background		Construction				0207040-22	0207040-33	0207040-27	0207059-06	0207059-01	0309196-16	0309196-17	0410156-02
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	9/29/2003	9/29/2003	10/28/2004
BETX (mg/kg)												i								
EPA Method SW8021B			l																	
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13	20 44 8	3300 (f)				74,000	26,000		4 (10)		NA NA	NA.	NA:	NA.	NA NA	NA	NA .	NA
Toluene	520	12	200	1440				68,000	39,000			180	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	420	210						24,000	19,000			100	NA:	. NA	NA.	NA.	NA NA	NA,	NA NA	≐NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)		-		NA.	NA	NA	NA	NA	NA	NA	NA
o Xylene	420 (g)	210 (g)	1					24,000 (g)	19,000 (g)	\$		100 (g)	NA	NA NA	NA.	NA NA	NA.	NA	NA	NA NA
												]								
DIOXINS AND FURANS (ng/kg)			l .									1								
Total TEQ												-	NA NA	NA	NA	NA	NA	NA	NA	NA

Page 9 of 21

Page 10 of 21

## TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												0-0.5	0-0.5	0-0.5	1.1.5	1-1.5	1-1.5	1-1.5	J-1.5
						SCREENING O	RITERIA												
								Risk-	Based Conce			1			COMP	COMP	COMP	COMP	COMP
Canada Islandida Nan							Soil Ingestion, I	Danmal Cantan	and labelette	Volatilization to Outdoor Air	Leaching to	LW42S (0-0.5)	LW43S (0-0.5)	1141440 (0.0.5)	G21 (1-1.5)	G22 (1-1.5)	000 (4.4.5)	004 (4 4 5)	005 (4.4.5)
Sample Identification: Laboratory Identification:	EPA Region	9 PBGs		Oregon SL	Vs	Background	Soil ingestion, t	Construction	Excavation	Outdoor Air	Groundwater	0410156-06	0410156-10	LW44S (0-0.5) 0410156-14	0108208-19	0108215-06	G23 (1-1.5) 0108215-02	G24 (1-1.5) 0108208-07	G25 (1-1.5) 0108215-10
Date Collected:		DAF=20	Piants	Mammals			Occupational	Worker	Worker	Occupational	Occupational	10/28/2004	10/28/2004	10/28/2004	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/29/2001
SEMIVOLATILES (mg/kg) EPA Method SW8270																			
2,6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								0.333 ∪	0.333 U	0.333 U	0.330 U	0.330 U	0.330 U	0.330 U	0.330 U
2 Methylnaphthalene		84 (b)	10 (b)	3900 (5)			e mar Alum					0.0667 U	0.0667 U		0.067 U	0.067 U			0.067 U
Acenaphthene	29000	570	20				41,000	16,000				0.0667 U	0.0667 U	0.0667 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Acenaphthylene Anthracene		84 (b) 12,000	10 (b)	3900 (b)				90,000	e se les			0.0667 U 0.0667 U	0,0667 U 0,0667 U	0.0667 U 0.0667 U	0,140 0,210	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U
Benzg(a)anthracene	21	2	and the supplementation				27	21	590	20 10 10 10 10 10		0.0717	0.201	0.0667 U	1.000	0.067 U			0.067 U
Benzo(a)pyrene	0.21	8		125			0.27	2,1	59		-	0.119	0.295	0.0667 U	1.400	0.067 U	0.067 U		0.067 U
Benzo(b)fluorantnene		5										0.156	0.393	0.0667 U	2,400	.0.067-U			
Benzo(g,h,i)perylene	190 (b)	84 (b) 49	10 (b)	3900 (b)			27	210	5900			0.0787 0.0667 U	0.203 0.117	0.0667 U	1.100 0.630	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U
Benzo(k)fluoranthene bis(2-Ethylhexyl)phthalate		3600 (c)	-	1020	4.5				3900	-	-	0.0667 U	0.07	0.0667 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U 0.067 U
Butylbenzylphthalate	100,000	930			,5 (d)							0.0667 U	0.0667 U		0.067 U	0.067 U			0.067 U
Carbazole	86	0.6									-	0.0667 U	0.0667 U	0.0667 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Ghrysene	210	160	100		y == 0		270	2100	59,000			0.083	0.235	0.0667 U	1.100	0.067 J			G.067 U
Dibenz(a,h)anthracene Dibenzofuran	0.21 1600	2	-	0:002			0.27	2.1	59			0.0667 U 0.0667 U	0.0667 U 0.0667 U	0.0667 U 0.0667 U	0.067 U 0.067 U	0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U
Diethylphthalate		3600 (c)		30,000 (e) 0.			-					0.0667 U	0.0667 U	0.0667 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Dimethylphthalate		8600 (c)			45 (e)							0.0667 U	0.0667 U	0.0667 U	0.067 U	0.067 U			0.067 U
Di-n-Bulylphthalate	62,000	2300	200		0.45		The same of the sa		-			0.0667 U	0.0667 U	0.0667 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Di n-Oëryi phthalate			200 (e)	30,000 (e) 0.	45 (e)		90.000	0000				0.0667 Ü	0.0667 U	0.0667 U	0 067 U	0 067 U			0,067 U
Fluoranthene Fluorene	22,000 26,000	4300 660	25:11:00 Table		30		29,000 35,000	8900 12,000				0.169 0.0867 U	0.502 0.0067-U	0.0667 U 0.0667 U	3.200 0.067 U	0.067 U 0.067 U	0.067 U 0.06∠U	0.067 U 0.062 U	0.067 U 0.067 U
Huorene Hexachioroethane	120	0.5		-			30,000	125,000		EA BALLOS ARADO	, 657 Literal Interpretation	0.133 U	0.133 U	0.133 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U
Indeno(1,2,3-od)pyrene	2.1	.14	1054	·	, * <b>.</b>		2.7	21	590			0.0667 U	0.158	0.0667 U	0.860	0.067 U	0.067 U	0.067 U	
Naphthalene	190	84	10	3900		THE LATE AND LONG SHIPS	770	710	20,000	 TATE ATRE: NOTHER BEAT. 600	15	0.0667 U	0.0667 U	0.0667 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Pentachlorophenol		0:03	3	30	4		1 to 2 to 2 to 2 to 2 to 2 to 2 to 2 to					0.833 0	0.333 U		0.930 U	9.336 U	0.336 U	0.330 U	
Phenanthrene Pyréne		84 (b) 4200					21.000	6700				0.0667 U 0.267	0.171 0.792	0.0667 U 0.0867-U	1.900 3.300	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U -0.067 U	0.067 U 0.067 U
1 yene	20,000		Charles	and the Company			- Division	Part of the little		- THE R. P. LEWIS CO., LANSING	The state of the state of the state of	Charles of the Party of the Control		SHEW SHOWS COMPANY		, Chair U	vide/ C	30.000.00	0.000
SEMIVOLATILES (mg/kg)		i																	
EPA Method SW8270SIM						1													
Acenaphthene Acenaphthylene	29,000 190 (b)	570 84 (b)	20	3900-(b)		 M	41,000	16,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene		12,000	(n.fp)	- 3900-(U)				90,000			and the second second	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
Benzo(a)anthracene	2.1	-2	- V - 22 - 22 - 22 - 22 - 22 - 22 - 22				2.7		590			NA NA		NA NA	NA NA	NA NA		NA NA	NA.
Benzo(a)pyrene	0.21	8	and the second second	125			0.27	2.1	59	manual materials to the later II for		NA	NA	NA NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		15										NA .	NA NA		NA			NA NA	
Benzo(g,h,i)perylene Benzo(k)fluoranthene		84 (b) 49		3900 (b)			27	210	5900			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	210	160					270	2100	59.000	-	-	NA.	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59			NA NA	NA .	NA:	NA.	NA NA	NA .	NA NA	NA.
Fluoranthene		4300	 	and a second sec	TO SHAPE A STATE OF THE STATE O		29,000	8900				NA	NA	NA	NA.	NA	NA	NA	NA
Elucrene	The Name of Street, or Street, Colored Street,	560			-30	e veneralist maner toner the	35,000 2.7	12,000	500			NA NA	NA.	NA .	NA III	NA.	Die Liebber Dieselder Beite - Gewerner Anne	NA NA	P NA
Indeno(1,2,3-cd)pyrene Naphthalene	2.1 190	14 84	10	3900			2.7 - 770	21 710	590 20,000		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene		84 (b)				No Mark Description Company of the C						NA	NA NA	NA	NA	NA	NA	NA NA	NA
Pyrena		4200					21,000	6700				NA I	NA NA	NA NA	NA	NA NA	NA.	NA:	NA *
CHLORINATED PHENOLS (mg/kg	*)								İ		•			i					
Method 8040/8270SIM	,,									l									
Pentachlorophenol	9.0	0.03	3	30	4							NA	NA	NA	NA	NA	NA	NA	NA
		ı							1	l				ļ					

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TABLE C-2a Page 11 of 21

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												0-0.5	0-0.5	0-0.5	1-34-4.5	1-1.5	1-1.5	1:135	J=1.5
i						SCREENING	POITEDIA								<u> </u>				
			_			30NEENING V	I	Risk-F	Based Concer	ntrations					COMP	COMP	COMP	COMP	COMP
										Volatilization to	Leaching to				1 00	30.00	00	00.11	00
Sample identification:			1				Soil Ingestion, (	Dermal Contact,	and Inhalation	Outdoor Air	Groundwater	LW42S (0-0.5)	LW43S (0-0.5)	LW44S (0-0.5)	G21 (1-1.5)	G22 (1-1.5)	G23 (1-1.5)	G24 (1-1.5)	G25 (1-1.5)
Laboratory Identification:	EPA Regio			Oregon S		Background		Construction	Excavation			0410156-06	0410156-10	0410156-14	0108208-19	0108215-06	0108215-02	0108208-07	0108215-10
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inv	erts	Occupational	Worker	Worker	Occupational	Occupational	10/28/2004	10/28/2004	10/28/2004	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/29/2001
VOLATILES (mg/kg)																			
EPA Method SW8260																			
1,2,4-Trimethylbenzene	170			3300 (f)		-	1500	1400	40,000	790	55	NA.	0.01_UJ		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromoethane	0.073						0.033	0.25	7.1	1.7	0.000059	NA .	0.01 UJ		0.001 U	0.001 U			0.001 U_
1,3,5-Trimethylbenzene	70	**		3300 (f)			1500	1400	40,000		12	NA NA	0.01 UJ		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone	110,000					Charles Service Control of the Contr		EBACE:				NA	0.04 UJ		0 005 U	0,005 U			0.005 U
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)		Part of the Part o				-		NA NA	0.01 UJ		0.001 U	0.001 U 0.005 U	0.001 U 0.0123	0.001 U 0.005 U	0.001 U
Acetone Benzene	54,000 1.4	16 0.03		1250 3300			34	340	9400	48	0.052	NA NA	0.01 UJ	0.01 UJ	0.005 U 0.001 U	0.001 U	0.012a 0.001 U	0.001 U	0.005 U 0.001 U
Carbon Disulfide	720	32		3300		and the same of th	34	340	THE REPLY ASSESSED.		0.052	NA NA	0.01 UJ		0.001 U	0.001 U	0.001 U		0.001 U
Ethylpenzene	400	13	a reliae mai	3300 (f)			74.000	28.000			Note that Summirmed	NA.	0.01 UJ	0.01 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropylbenzene	2000		To Marie	3300 (f)	WARM.		51,000	24,000				NA.	0.01 UJ		0.001 U	0.001 U	0.001 U		0.001 U
m.p-Xylene	420 (g)	210 (g)				-	24,000 (g)	19,000 (g)				NA	0.02 UJ		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Methyl lod de		386					5					NAT	NA NA	. NA	0.001 U	0.001 U	0.001 U	= 0.001_U	0.001 U
Methyl tert-butyl ether	70					-	760	9000		720	0.30	NA	0.01 UJ	0.01 UJ	NA	NA	NA	NA	NA
Naphthalene		84	10				770	710	20,000		15	NA NA			0.010 U	0.010 U		0 010 U	0.010 U
n-Butylbenzene	240	Committee and a		3300 (f)								NA	0.01 UJ	0.01 UJ	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
n-Propylbenzene				3300 (f)			19,000	9300				NA NA	10.01 UJ		0.001 U	0.001 U			0.001.U
o-Xylene	420 (g)	210 (g)	1				24,000 (g)	19,000 (g)			100 (g)	NA	0.01 UJ	0.01 UJ	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
sec-Butylbenzene	220 390			3300 (f) 3300 (f)				-				NA NA	0.01 UJ 0.01 UJ	0.01 UJ 0.01 UJ	0.001 U 0.001 U	0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U
tert-Butylbenzene Troluene		12	200	1440			68,000	39,000			180	NA NA	0.01 UJ		0.001 U	0.001 U	0.001 U		0.001 U
, superie	020	12	Service Control	1970 mm			00,000				100			-0.01.00	0.00+-0	0.001	0.001.0		OLDO LA
HYDROCARBONS (mg/kg)																			
		i					l												
NWTPH-HCID							22,000	13,000		80,000	110	NA	NA	NA .	21.7 U	21.5 U	22.0 U	21.7 U	21.5 U
Gasoline Kerosene						AND THE RESERVE AND THE PERSON NAMED IN	22,000			60,000	CONTRACTOR STATES	NA NA	NA NA	NA NA	54.3 U	21.5 U	54.9 U	54.3 U	53.8 U
Diesel	- MEDINATE PARTY			**		-	70,000	23,000				NA NA	NA	NA NA	54.3 U	53.8 U	54.9 U	54.3 U	53.8 U
Lube Oil												NA NA	NA NA	NA	109 U	108 U	110 U		108 U
	Pa-Constitution of the Particular	1700						- 130 AOO - 361 - 130415	VERNORS TANKS TO VERNORS	Management and Control of the Contro									THE THE STREET SHADOW SHADOW
NWTPH-Dx (mg/kg) TPH-Diesel Range							70,000	23,000				17.2 U	44.9	17 U	NA	NA	NA	NA	NA
TPH-Dieser hange							70,000	23,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.
TPH-Motor Oil Range	**		-			- E & MARK 100 - DOC 100						57.5 U	79.5	56.6 U	NA.	NA.	NA.	NA	NA
, , , , , , , , , , , , , , , , , , ,									i										
NWTPH-G (mg/kg)								40.000				0.07.11					• • • •		
TPH-Gasoline Range	**				- :	-	22,000	13,000	-	80,000	110	2.87 U	18.2	48.1	NA	NA	NA	NA	NA
PRIORITY POLLUTANT									I										
METALS (mg/kg)											- 1								
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i) 60	i) 5 (j)						1.72 U	1.72 U	1.72 U	2.67	2.14	1.84	2.50	2.75
Chromium (6010)	450 = =	. 38			(h)(k) 0.4 (r		*					18.5	146	89,7	15.6	14.9	14.0	14.9	16.7
Copper (6010)	41,000	-	100	390	190 50							20.4	35.7	19.7	14.7	12.7	17.3	12.1	12,9
Lead (7421)	800		5Q :	4000	16. 50	) , 9	750	750	750		30	14.1	141	55.6	3.17	2,68	2.27	2.69	1.92 U
Nickel (6010)	20,000	130	30	625	320 20	Charles Company (CVC)						23.5	40.5	43.4	17.8	16.8	17.2	16.6	18.4
Zin. (6010)	100,000	12,000	50 (h)	20.000	80 (h) 20	60.2						72,4	156	158	60.3	45.1	42.5	44.5	46.3
	450			405							I	N/A		.,,	N14	N/A		***	***
Cadmium (6010)	450 310	8	4 - 0.3	125	6 20							NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Mercury (7471)	, JIU		- U.J	7.3	1.3: 0.						DAY STATE OF THE STATE OF	NA STATE	INM	INM	A STATE OF THE STA	(VA	IN/K	TWA .	NA.
ı						1			J	ı	ľ			1					

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### TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

Page 12 of 21

													0-0.5	0-0,5	0-0.5	1-1.5	1-1,6	1-165	1-1.5	1-1,5
1							SCREENING C	RITERIA												
									Risk-	Based Concer	itrations					COMP	COMP	COMP	COMP	COMP
											Volatilization to					1				
Sample Identification:	!		i					Soil Ingestion, I			Outdoor Air	Groundwater	LW42S (0-0.5)	LW43S (0-0.5)	LW44S (0-0.5)	G21 (1-1.5)	G22 (1-1.5)	G23 (1-1.5)	G24 (1-1.5)	G25 (1-1.5)
Laboratory Identification:		ion 9 PRGs		Oregon			Background		Construction				0410156-06	0410156-10	0410156-14	0108208-19	0108215-06	0108215-02	0108208-07	0108215-10
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	10/28/2004	10/28/2004	10/28/2004	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/29/2001
BETX (mg/kg)			$\Box$																	
EPA Method SW8021B																				
Benzene	1.4	0.03	-	3300	***			34	340	9400	48	0.052	NA_	NA	NA .	NA NA	NA.	NA	NA	NA
Ethylbenzene	-400	13	-	3300 (f)		-		74,000	28,000				NA	NA NA	NA NA	NA.	NA NA	NA .		NA F
Toluene	520	12	200	1440				68,000	39,000	_		180	NA.	NA	NA	NA NA	NA NA	NA	NA	NA
Xylenes, Total	420	210	: _		202-2020			24,000	19,000			100	NA NA	NA NA	NA .	NA NA	NA NA		NA.	NA .
m,p-Xylene	420 (g)	210 (g)	-				-	24,000 (g)	19,000 (g)				NA	NA.	NA.	NA	NA.	NA	NA NA	NA NA
m,p-Xylene g-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)		****	100 (g)	NA.	NA	. NA	NA	NA NA	NA.	NA NA	NA.
DIOXINS AND FURANS (ng/kg)			1			- 1		<b>!</b>				1								
Total TEQ		**						-		-	-	24	NA	NA	NA	I NA	NA	NA	NA	NA

TABLE C-2a Page 13 of 21

# SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												1-1.5	1-1.5	1-1.5	1-1.5	1-1.5	1-1.5		1-115
						SCREENING (	BITERIA												
						1		Risi	k-Based Conce			COMP	COMP	COMP					
01-1							Collegentian	Daymal Canta	ct, and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	C00 (1.1.E)	G27 (1-1.5)	BA14 (1-1.5)	BT-01 (1-2)	BT-02 (1-2)	BT-03 (1-2)	BT-11(1-2) Dup of BT-03 (1-2)	BT-04 (1-2)
Sample Identification: Laboratory Identification:	EPA Regi	on 9 PRGs		Oregon SI	Vs	Background	Soil Ingestion,	Construction		Ouldoor Air	Groundwater	G26 (1-1.5) 0108215-14	0108208-11	0108208-14	0207040-02	0207040-09	0207040-14	0207040-07	0207059-19
Date Collected:			Plants		Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/29/2001	8/28/2001	8/28/2001	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002
SEMIVOLATILES (mg/kg)			T																
EPA Method SW8270																			
2,6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)	GMC/SSCHAL COL SHIP			عدن د				0.330 U	0.330 U	0.330 ↓		NA NA	NA NA	NA	NA NA
2-Methyrraphthalene Acenaphthene	190 (b) 29000	<b>84 (b)</b> 570	10 (b) 20	3900 (b)			41,000	16,000				0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		NA NA	INA. NA	NA NA	NA NA
Acenaphthylene	190 (b)	84 (b)		3900 (b)			41,000	10,000				0.067 U				NA NA		NA NA	NA.
Anthracene	100,000	12,000			**			90,000				0.067 U	0.067 U	0.067 U	NA NA	NA	NA	NA	NA
Benzg(a)anthracene	2.1	2		The Res			27	21	590			0.067 U	0.067 U	0.067 U		NA -	NA	NA NA	NA NA
Benzo(a)pyrene Benzo(b)fluoranthene	0.21 2.1	8 5		125		6.00 M	0.27	2.1	59			0.067 U 0.067 U	0.086 0.140	0,067 U 0,067 U		NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)						-		0.067 U	0.067 U	0.067 U		NA NA	NA NA	NA	NA
Benzo(k)fluoranthene	21	49					2/	210	5900	# 15 W 16		0.067 ⊎		0.067 U			NA.	NA NA	NA.
bis(2-Ethylhexyl)phthalate	120	3600 (c)	edit - chieschess		4.5						AN JUNE HARE SHEET	0.067 U	0.067 U	0.067 U		NA	NA	NA NA	NA NA
Butylbenzylphthalate Carbazole	100,000 86	930 0.6		1020 (d) 4	l.5 (d)							0 067 U	0:067 U 0:067 U	0.067 U 0.067 U		NA NA	NA NA	NA NA	NA NA
Chrysens	210	160					270	2100	59,000		BIE SE	0.067 U		0.067 U		NA.		NA NA	NA.
Dibenz(a,h)anthracene	0.21	2		-			0.27	2.1	59	-		0.067 U	0.067 U	0.067 U		NA	. NA	NA NA	NA
Dibenzofuran	1600											0.06Z U				NA NA	NA .		NA #
Diethylphthalate Dimethylphthalate	100,000	3600 (c)		30,000 (e) 0 30,000 (e) 0	.45 (e) .45 (e)	-				-		0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		NA NA	NA NA	NA NA	NA NA
Di-n-Butylphthalate	62,000	2300	200 (8)		0.45	-		-			S 20- MO-17	0.067 U	0.067 ∪	0.067 U		NA NA	NA	NA NA	NA NA
Di-n-Cotyl phthalate	25,000	10,000		30,000 (e) 0.							*	0.067 U		0.067 U	NA.	NA	NA-	NA NA	. NA
Fluoranthene	22,000	4300		-		THE PARTY NAME OF THE PARTY NAMED OF THE PARTY.	29,000	8900			-	0.067 U	0.110	0.067 U		NA_	NA	NA NA	NA
Fluorene	26,000	560			30		35,000	12,000				0.067 U 0.130 U	0.067 U 0.130 U	0.067 U 0.130 U		NA NA	NA NA	NA NA	NA NA
Hexachloroethane Indeno(1,2,3-cd)pyrene	120 2.1	0.5 14					27	21	 590			0.130 U		0.067 U		NA NA	NA NA	NA NA	NA NA
Naphthalene	190	84	10	3900			770	710	20,000		15	0.067 U	0.067 U	0.130 U		NA	NA	NA	NA
Pentachlorophenol	9.0	0.03	3	30	A							U.008.0	0.320 U	0,330 U		NA .	. NA	NA .	NA.
Phenanthrene	190 (b)	84 (b)					21,000					0.067 U 0.067 U	0.067 U 0.130	0.067 U	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrenc	29,000	4200					21,000	D/00	•			1	0,180	0.067 0	100	INA		190	INA
SEMIVOLATILES (mg/kg)						1													
EPA Method SW8270SIM																			
Acenaphthene	29,000	570	20				41,000	16,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene Anthracene	190 (b) = 100,000	84 (b) 12,000	10(6)	3900 (b)				90,000	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	2.1	12,000			e di ta		27 =	21	590			NA .	NA .		NA NA	NA.	- NA	NA	NA .
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59			NA NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	2.1	5	40.00									NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b)	84 (b) 49	10 (b)	3900 (b)			27	210	5900			NA NA	NA NA	NA NA	NA A				NA NA
Chrysene	210	160	-				270	2100	59,000			NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	0.21	2		10 × 1		24.4	0.27	21.	59			NA .	NA_	NA NA	NA NA		NA NA		NA.
Fluoranthene	22,000	4300					29,000	8900				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Fluorene Indeno(1,2,3-cd)pyrene	.26,000 2.1	560 14			30		35.000 2.7	12,000 21	590			NA NA	NA NA	NA NA	NA S	NA NA	NA NA	NA NA	NA NA
Naphthalene	2.1 2.190	_ 84 _	. 10	3900			770		20.000		15	NA NA	NA NA	NA.		NA NA	NA NA		NA
Phenanthrene	190 (b)	84 (b)										NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	29,000=	-4200					21,000	6700				, NA	, NA	NA .	NA NA	. NA	NA NA	NA	NA.
CHLORINATED PHENOLS (mg/kg	٠١		1			(						ļ							
Method 8040/8270SIM	3)																		
Pentachlorophenol	9.0	0.03	3	30	4		-			_		NA	NA	NA	NA	NA	NA	NA	NA
·											l								

7/19/05 WEdmidatalwprose/23/1009/13/2/Phill RI 07/1905/Phill RI RC\_App C BTTF 0-3

TABLE C-2a Page 14 of 21

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												1-1.5	1-1:5	1-1-5	1-1,5	CO 441.5	1-1,5	19.5	1-1.5
					SC	REENING C	RITERIA					<del> </del>							
		T						Risk	-Based Conce			COMP	COMP	COMP					
										Volatilization to	Leaching to	1						BT-11(1-2)	
Sample Identification:	FD4 D 6 DD0-	1		OLV-	1.		Soil Ingestion, I			Outdoor Air	Groundwater	G26 (1-1.5)	G27 (1-1.5)	BA14 (1-1.5)	BT-01 (1-2)	BT-02 (1-2)	BT-03 (1-2)	Dup of BT-03 (1-2)	BT-04 (1-2)
Laboratory Identification: Date Collected:	EPA Region 9 PRGs Industrial DAF=20	Plants	Oregon Mammais		nverts Ba	ackground	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	0108215-14 8/29/2001	0108208-11 8/28/2001	0108208-14 8/28/2001	0207040-02 7/8/2002	0207040-09 7/8/2002	0207040-14 7/8/2002	0207040-07 7/8/2002	0207059-19 7/9/2002
	ilidustiai DAr≔20	1 tarita	Wallings	Dilus II	inverta		Occupationar	Worker	VVOIREI	Occupational	Occupational	0/23/2001	d/26/2001	8/20/2001	170/2002	776/2002	71072002	7/0/2002	779/2002
VOLATILES (mg/kg) EPA Method SW8260																			
1.2.4-Trimethylbenzene	170	1	3300 (f)				1500	1400	40,000	790	55	0.001 U	0.001 U	0.001 U	NA	NA	NA	NA	NA
1.2 Dibromocthanc	0.073		3300 (1)				0.033	0.25	10,000	1.7	0.000059	0.001 U	0.001 U	0.001:U	NA NA				
1,3,5-Trimethylbenzene	70 -		3300 (f)	42. Calenda Art Bell (198			1500	1400	40,000		12	0.001 U	0.001 U	0.001 U	NA	NA	NA.	NA NA	NA
2-Butanone	110,000				<b>RE 5</b>		- 11 - P 12					0.005 U	0.005 U	0,005 U	NA .	NA:	NA	NA NA	NA NA
4-Isopropyltoluene	520 (a) 12 (a)	200 (a)				e rouse superiord			PROGRAMMAN AND THE REAL PROCESS			0.001 U	0.001 U	0.001 U	NA	NA	NA	NA	NA
Agelone	54,000 <b>16</b>		1250							4 66 2 3		0.0204	0.005 U	0,005 U	NA.	. NA	NA.	NA	NA
Benzene Carbon Disuffide	1.4 <b>0.03</b> 720 <b>32</b>	-	3300	CONTRACTOR OF THE PARTY.			34	340	9400	48	0.052	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U	NA NA	NA NA	NA	NA NA	NA NA
Ethylbenzene	720 <b>32</b> 400 <b>13</b>	TIMOTOMOT THE	3300 (f)	COMPANIES THE PERSON	-		74,000	28,000			# 14 A A A A A A A A A A A A A A A A A A	0.001 U	0.001 U	0.001 U 0.001 U	NA NA	NA NA	NA: NA	NA NA	NA NA
Isopropylbenzene	2000		3300 (f)				51,000	24.000				U.001 U	0.001 U			NA NA	NA NA		NA NA
m,p-Xylene	420 (g) 210 (g)		••			***	24,000 (g)	19,000 (g)		**		0.002 U	0.002 U	0.002 U	NA	NA	NA	NA	NA
Methyl lodide								e per in più sa		7		0:001 U	0.001 U	0.001 U	NA.	NA .	. NA	NA NA	NA
Methyl tert-butyl ether	70		ogni ir cesaral mana and	-			760	9000		720	0.30	NA	NA	NA	NA	NA	NA	NA	NA
Naphhalene	190 : 84 240	10					770	710	20,000		15	0.010 U 0.002 U	0.010 U 0.002 U	0.010 U 0.004 U	NA	NA.	NA:	NA:	NA.
n-Butylbenzene n-Propylbenzene	240	100	3300 (f) 8300 (f)				19,000	9300				0.002 U	0.002 U	0.001 U	NA NA	NA NA	NA NA	NA NA	NA NA
o-Xvlene	420 (g) 210 (g)	1				**	24,000 (g)	19,000 (g)			100 (g)	0.001 U	0.001 U	0.001 U	NA NA	NA NA	NA.	NA NA	NA
sec Butylbenzene	220 4	75.4	3300 (f)								- 37	0:001 U	0.001 U	0.001 U	NA.	NA.	NA NA	NA NA	NA
tert-Butylbenzene	390		3300 (f)								-	0.001 U	0.001 U	0.001 U	NA.	NA	NA	NA	NA
Toluene	520 12	200	1440				68,000	39,000			180	0.001.0	0.001 U	0.001 U	NA.	. NA	NA .	NA.	NA NA
HYDROCARBONS (mg/kg)																			
		l																	
NWTPH-HCID																			
Gasoline Kerosene					CONTRACTOR		22,000	13,000		80,000	110	22.7 U 56.8 U	21.7 U 54.3 U	21.5 U 53.8 U	21.8 U 54.5 U	21.8 U 54.6 U	21.9 U 54.7 U		21.8 U 54.6 U
Diesel				U 185.784.1E% 2		-	70,000	23,000				56.8 U	Diesel	53.8 U	54.5 U	54.6 U	54.7 U		54.5 U
Lube Oil					2325				25.0			114 U	109 U		109 U				109 U
NWTPH-Dx (mg/kg)	and the same of th		AND AND ADDRESS OF THE PARTY OF																Carlot Ca
TPH-Diesel Range				_			70.000	23,000	_			NA	58.5	NA	NA	NA	NA	NA	NA
TPH-Kerpsene Range												NA.	NA NA	NA .	NA.	NA NA	NA NA	NA NA	NA NA
TPH-Motor Oil Range												NA	65.5	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)					- 1														
TPH-Gasoline Range							22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA
_		1				ŀ													
PRIORITY POLLUTANT																			
METALS (mg/kg)	40.6	40.0	no di	40 (b) 0	10 C)					1		0.00	0.70	0.74					
Arsenic (7060) Chromium (6010)	1.6 (h) 29 450 38	10 (i) 1 (h)(k)	29 (i) 340.000 (k)		iO (i) (fib/k)	5 (j) 23 1						2.03	2.72 16.1	2.61 14.3	NA NA	NA = NA	NA NA	NA NA	NA NA
Copper (6010)	41,000	100	390		50	19.1					9-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	14.9	15.2	12.9	NA NA	NA.	NA.	NA	NA NA
Lead (7421)	800	50	4000		500	9	750	750	750		30	5,54	193	3.07	NA NA	NA NA	NA NA	NA NA	NA
Nickel (6010)	20,000 130	30	625		200	21.4		**				22.8	18.4	17.0	NA	NA	NA	NA	NA
Zinc (6010)	100,000 12,000	50 (h)	20,000	60 (h)2	200	60.2						49.3	48.2	47.4	NA NA	NA	NA	NA.	NA .
0-4-1	, , i		405			İ							***		***				
Cadmium (6010) Mercury (7471)	450 8 - 610-	4	125 73		20 <b>0.1</b>							NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
merotick (vac.)		9		100	V.1							1974	- IVA	- INV		A NA	Printer and Marie	INM	THE RESERVE OF THE PERSON NAMED IN
		1				,													

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#### TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

1-1.5 14.5 141.5 141.5 141.5 SCREENING CRITERIA COMP Risk-Based Concentrations COMP COMP Volatilization to BT-11(1-2) Leaching to Sample Identification Outdoor Air Groundwater G26 (1-1.5) G27 (1-1.5) BA14 (1-1.5) BT-01 (1-2) BT-02 (1-2) BT-03 (1-2) Dup of BT-03 (1-2) BT-04 (1-2) EPA Region 9 PRGs 0207040-02 7/8/2002 Laboratory Identification: Oregon SLVs Construction Excavation 0108215-14 0108208-11 0108208-14 0207040-09 0207040-14 0207040-07 0207059-19 Date Collected: Industrial DAF=20 Plants Marnmais Birds Inverts 8/28/2001 Worker Worker 8/29/2001 8/28/2001 7/8/2002 7/8/2002 7/9/2002 BETX (mg/kg) EPA Method SW8021B 0.03 9400 0.052 NA NA NA Ethylbenzene 400 13 74,000 28,000 NA NA NA -NA. NA. NA NA. NA. 200 68,000 39,000 N.A NA NA NA NA NA Xylenes, Total 420 210 24,000 19,000 100 NA NA NA NA NA NA -NA 420 (g) 210 (g) -- -- -- -- 420 (g) 210 (g) 1- -- --24,000 (g) 19,000 (g) NA NA NA 24,000 (g) 19,000 (g) NA NA NA NA NA NA DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA

Page 15 of 21

TABLE C-2a Page 16 of 21

## SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

												1-1.5	1-1.5	1-1.5	1-1.5	1-1,5	1-1.5	= 4-1.5 °∫ el	756 141,5
						SCREENING (	CRITERIA					·							
								Risk-	Based Conce			]							
										Volatilization to	Leaching to	1		BT-13 (1-2)		BT-12 (1-2)			
Sample Identification:		ion 9 PRGs		Oregon !	01.11-	Background	Soil Ingestion, D	ermal Contact, Construction	, and inhalation Excavation	Outdoor Air	Groundwater	BT-05 (1-2) 0207040-18	BT-06 (1-2)	Dup of BT-06 (1-2)		Dup of BT-07 (1-2)	BT-08 (1-2)	BT-09 (1-2)	BT-10 (1-2)
Laboratory Identification: Date Collected:	Industrial	DAF=20	Plants	Mammais	Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	7/8/2002	0207059-14 7/9/2002	0207059-12 7/9/2002	0207040-23 7/8/2002	0207040-34 7/8/2002	0207040-28 7/8/2002	0207059-07 7/9/2002	0207059-02 7/9/2002
	I	5711 20	T Add to	THE THICK	Direct Involve	1	T COSAPANONA.	170.1101	71011101	I	T CCCCAPACIONAL	110,2002	110,2002	110/2002	170/2002	77072002	170-2002	77012002	77012002
SEMIVOLATILES (mg/kg) EPA Method SW8270										l									
2.6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)						_		NA.	NA	NA	NA	NA	NA	NA	NA
2-Methynaphthalene	190 (b)	84 (b)	10 (b)	3900 (b)								NA.	NA	NA NA	NA.	NA NA	NA NA	NA NA	NA
Acenaphthene	29000	570	20				41,000	16,000	-			NA.	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	190 (b)	84 (b)	10 (b)	3900 (b)				1,01,00				NA NA	NA.	NA NA	. NA	NA .		NA:	NA
Anthracene	100,000	12,000				-		90,000	_		-	NA	NA	NA	NA NA	NA	NA	NA	NA
Benzo(a)anthracene Benzo(a)pyrene	2.1 0.21	<b>2</b> 8	GOOD SACON	125			2,7 0.27	21 2.1	590 59	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	2.1	5		120			0.27		35			NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)				••				NA.	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	-21	49					27	210	5900			∷ NA	NA NA	NA-	NA.	NA.	. :.NA .	NA NA	NA NA
bis(2-Ethylhexyl)phthalate	120	3600 (c)	-	1020	4.5		TIRLET SANSSHARE SANS		WARK THIST CHIEF WA			NA NA	NA	NA NA	NA NA	NA	NA NA	NA_	NA
Bulylberzylphthalale	100,000	930		1020 (d)	4.5 (d)								NA-	NA =	NA	NA NA	NA NA	NA NA	NA NA
Carbazole Chrysene	86 210	0.6 160	20 - DARD - S				270	2100	59,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene	0.21	2		POM BOOKED			0.27	2.1	59			NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenzofuran	1600			0.002	( )4-( ) ( ) ( ) ( ) ( )				distant is			NA NA	-NA	NA NA	NA NA	NA NA	NA.	NA.	S NA
Diethylphthalate	100,000	3600 (c)	200 (e)	30,000 (e)		-						NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphhalate	100.000	3600 (c)	200 (e)	30:000 (e)						312 2-01		NA.	NA NA	NA.	NA NA	NA.	NA .	NA	NA NA
Di-n-Butylphthalate	62,000	2300	200	30,000	0.45	-				-		NA NA	NA	NA NA	NA	NA	NA	NA	NA
Di-n-Octyl phthalate Fluoranthene	25,000 22,000	10,000 4300	200 (e)	30,000 (e)	0.45 (e)		29.000	8900				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	26,000	- 560			30		35,000	12,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
Hexachloroethane	120	0.5										NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	.2.1	14	64.5				2.7	21	590			NA.	NA NA	AiA	NA -	NA.	NA	NA NA	NA NA
Naphthalene	190	84	10	3900		**	770	710	20,000		15	NA.	NA	NA	NA	NA NA	NA	NA	NA
Pentaphlorophenol	9.0	0.03	- 3	= 30	4							NA.	NA.		NA.	NA	, NA	NA NA	NA -
Phenanthrene Pyrene	190 (b) 29,000	84 (b) 4200					21,000	6700				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
r prene	23,000	7200					21,000	0700				MO		STATE STATE STATE		120 an	and the same of th		ine.
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270SIM			ĺ				l				·								
Acenaphthene	29,000	570	20	Characteristics			41,000	16,000	militarii		Side or Market and American	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	190 (b)	84 (b)										NA =	NA.	NA.	NA .	- NA	NA NA	NA.	NA
Anthracene Benzo(a)anthracene	100,000 2.1	12,000 2		-			2.7	90,000 21	 590			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59		**	NA.	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthone	2.1	6 =										NA .	. NA	NA.	NA.	. NA	NA.	NA 1	NA NA
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)	Fr Fr							NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	21:	49					27	. 210	5900			NA NA	NA	NA NA	NA.	NA NA	NA NA	NA	NA.
Chrysene	210 0.21	160					270	2100	59,000 59		Later Control	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA
Dibenz(a,h)anthracene Fluoranthene	22,000	2 4300	Break Ask	1 de 160 de 1			29.000	2.1 8900	200			NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Filtorene	26,000	560			- 30		35,000	12,000			14.4	NA NA	NA NA	NA .	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene	2.1	14		**	**		2.7	21	590			NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	190	84	10	3900="=	- ALC: 07.743		770	710	20,000		15	NA'	NA.	NA NA		NA NA	NA	NA	NA.
Phenanthrene	190 (b)	84 (b)										NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	29,000	4200					21,000	6700				NA .	NA NA	NA	NA NA	NA NA	NA	NA	NA
CHLORINATED PHENOLS (mg/kg	1									j									
Method 8040/8270SIM	,									ļ	l i								
Pentachlorophenoi	9.0	0.03	3	30	4					- 1		NA	NA	NA	NA	NA	NA	NA	NA

7/19/05 NEdmidata/wprod/231/00/9/13/2/Phill RI 071995/Phill RI RPt\_App C BTTF 0-3

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III BI

TERMINAL TANK FARM AREA (0-3 FT)
PHASE III RI

													1-1.5	1:1.5	1-1-5	1-1.5	1966 - 1985 www.	1-1-6	1-1.5	1-1.5
							SCREENING C	RITERIA			*****				*					
							1		Risk-	Based Conce	ntrations		i							
											Volatilization to				BT-13 (1-2)		BT-12 (1-2)			
Sample Identification:								Soil Ingestion, D			Outdoor Air	Groundwater	BT-05 (1-2)	BT-06 (1-2)	Dup of BT-06 (1-2)		Dup of BT-07 (1-2)	BT-08 (1-2)	BT-09 (1-2)	BT-10 (1-2)
Laboratory Identification:		on 9 PRGs	-	Oregon			Background	l	Construction	Excavation	l		0207040-18	0207059-14	0207059-12	0207040-23	0207040-34	0207040-28	0207059-07	0207059-02
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	7/8/2002	7/9/2002	7/9/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002
VOLATILES (mg/kg)								1												
EPA Method SW8260			1																	
1,2,4-Trimethylbenzene	170	THE STREET STREET, NO.		3300 (f)				1500	1400	40,000	790	55	NA NA	NA	NA NA	NA	NA NA	NA	NA NA	NA
1,2-Dibromoethane	- 0.073						25.4	0.033	0:25	71	1.7	0.000059	NA.	NA.	NA.	NA		NA NA	NA NA	NA_
1,3,5-Trimethylbenzene	70			3300 (1)		and the second	O PROGRESS ESSAN CAMPA	1500	1400	40,000	- WEST-PORTS WISES VISION	12	NA	NA	NA	NA	NA	NA	NA	NA NA
2 Butanone	110,000								V2-1-07-1-100-1-100-1				LE NA	NA NA	, NA	NA.		NA .	NA.	NA
4-Isopropyltoluene Acetone	520 (a)	12 (a)	200 (a)	1440 (a)				SECTION SOSTION					NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Benzene	54:000 1.4	16 0.03	-	1250 3300		Mail Sell		34	340	9400	48	0.052	NA NA	NA: NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Carbon Disulfide	720	32		3300				34	340	9400	40	0.052	NA NA	NA NA	AVI	NA NA	NA NA	NA NA	NA NA	NA NA
Ethylbenzene	400	13		3300 (f)	**		Descriptions of the second	74.000	28,000		**	**	NA NA	NA	NA.	NA.	NA NA	NA NA	NA NA	NA NA
Isopropylbenzene	2000			3300 (f)	and the latest transport to the			51.000	24,000				NA -	NA NA		NA.		NA NA	NA NA	NA NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)				NA	NA	NA	NA	NA	NA	NA	NA
Methyl lodide													NA NA	NA.	NA.	NA.		NA.	-NA	NA NA
Methyl tert-butyl ether	70							760	9000		720	0.30	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	19¢	84	- 10	3900				770	710	20,000		15	NA.	NA.	NA NA	. NA	NA NA	NA I	NA NA	NA
n-Butylbenzene	240			3300 (f)	**				4.0				NA NA	. NA	NA	NA	NA NA	NA	NA	NA
n-Propylbenzene	240			3300 (f)				19,000	9300				- NA :	NA:	NA.	- NA		NA NA		NA T
o-Xylene	420 (g)	210 (g)	1				27-100-120-120-120-120-120-120-120-120-120	24,000 (g)	19,000 (g)		-	100 (g)	NA	NA	NA	NA	NA	NA	NA	NA
sec-Bulylbenzene	220												NA .	NA.	NA	NA NA		NA .	NA	NA.
tert-Butylbenzene Tolbene	390 520	12	200	3300 (f)				68,000	39,000			180	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
TOBBIR.	Jeu	12	200	1440		-		00,000	39,000			150	IVA		NA.	and the Man	NA.	-NA	NA .	NA .
HYDROCARBONS (mg/kg)						- 1														
NWTPH-HCID																				
Gasoline				_		1		22,000	13,000		80,000	110	22.4 U	22.2 U	22.2 U	21.6 (	J 22.2 U	21.7 U	21.7 U	22.2 U
Kerosene								5045-45 H-E	10,000		00,000		66.1 U	55.6-U		54.1 \		54.2 U	54.3 U	
Diesel	**	**************************************	constant measurement				NONET PROPERTY - A. SHINGS TO A COM-	70,000	23.000		entra company to the control of	ALIFE SELECTION VICTOR TO THE PARTY OF	56.1 U	55.6 U		54.1 L		54.2 U	54.3 U	55.5 U
Lube Oil		14 W 15						We as a first					112 U	111 0	111 U	108 (	J 1110	108 U	109 U	
NWTPH-Dx (mg/kg)																				
TPH-Diesel Range		_						70,000	23,000				NA	NA	NA	NA	NA	NA	NA	NA
1PH Kerosens Range								70,000					NA NA	NA NA	NA NA	NA NA	NA NA	NA -	NA NA	NA
TPH-Motor Oil Range										apr - more of the common commo			NA	NA	NA	NA	NA NA	NA	NA	NA
-						- 1														
NWTPH-G (mg/kg)						- 1		00.000	46.000		80,000	110	NA	N/4	N1.0	N/ 6	8/8	• • • •		
TPH-Gasoline Range								22,000	13,000		80,000	110	INA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																				
METALS (mg/kg)						1														
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i) (	60 (i)	5 (J)						NA	NA	NA	NA	NA	NA	NA	NA
Chromium (6010)	450	38	1 (b)(k)	340,000 (k)		4 (h)(k)	23.1						NA	NA .	NA NA	NA-	NA NA	-NA	NA.	NA.
Copper (6010)	41,000		100	390		50	19.1				-		NA	NA NA	NA	NA NA	NA NA	NA	NA	NA
Lead (7421)	800		50	4000		500	9	750	750	750		- 30	NA NA	NA.			NA	NA.	NA NA	NA
Nickel (6010)	20,000	130	30	625		200	21.4						NA	NA	NA	NA	NA	NA	NA	NA
Zinc (6010)	100,000	12,000	50 (f)	26.900	60 (h)	200	60.2				***		NA.	NA NA	NA :	, NA	NA NA	NA .	NA	NA
0-4-1 (0040)	450			405			l						814	815						
Cadmium (6010) Mercury (7471)	450	8	4	125 73	6 1.5	20				Madella deletitare			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Mercally (7971)	310		0.3	7.5.1.2		U.L.				Var.575826436			SET SEED MARKETE	1N/A	in in its	, NA	INA L	INA.	NA.	NA:

Page 17 of 21

# TABLE C-2a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (0-3 FT) PHASE III RI

Page 18 of 21

1-1.5 SCREENING CRITERIA Risk-Based Concentrations Volatifization to Leaching to BT-13 (1-2) BT-12 (1-2) Sample Identification: Soil Ingestion, Dermal Contact, and Inhalation Outdoor Air Groundwater BT-05 (1-2) BT-06 (1-2) Dup of BT-06 (1-2) BT-07 (1-2) Dup of BT-07 (1-2) BT-08 (1-2) BT-09 (1-2) 0207059-07 BT-10 (1-2) 
 Ory Identification:
 EPA Region 9 PRGs
 Oregon SLVs

 Date Collected:
 Industrial
 DAF=20
 Plants
 Mammals
 Birds
 Inverts
 Laboratory Identification: Construction Excavation 0207059-14 0207059-12 0207040-23 0207040-34 0207040-28 0207059-02 Worker 7/8/2002 7/9/2002 7/8/2002 7/9/2002 BETX (mg/kg) EPA Method SW8021B NA Benzene 0.03 9400 0.052 NA NA NA NA NA 3300 (f) NA NA NA Efhylbenzene ...... 400 13 74,000 28,000 NA NA NA --NA NA NA NA 12 200 1440 68,000 39,000 180 NA NA NA NA NA Toluene 520 NA NA NA Xylenes, Total 24,000 19,000 NA... NA NA NA NA 100 NA 210 24,000 (g) 19,000 (g) --24,000 (g) 19,000 (g) --420 (g) 210 (g) NA NA NA NA m.p-Xylene NA NA NA o-Xytene 420 (g) 210 (g) 100 (g) NA NA . NA DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA NA NA

												1-1.5	1-1.5	1-1.5	1-1.5
						SCREENING O	CRITERIA								
				•				Risk-	Based Concer						
Ones la Identification							0-74			Volatilization to			111111001111	100000000000000000000000000000000000000	
Sample Identification: Laboratory Identification:	EPA Regi	ion 9 PRGs		Oregon	SLVs	Background	Soil Ingestion, D	Construction		Outdoor Air	Groundwater	LW41S (1-1.5) 0410156-03	LW42S (1-1.5) 0410156-07	0410156-11	0410156-15
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inverts	Duong.cama	Occupational	Worker	Worker	Occupational	Occupational	10/28/2004	10/28/2004	10/28/2004	10/28/2004
SEMIVOLATILES (mg/kg)			i i		•	ĺ		-		l					
EPA Method SW8270															
2,6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								0.333 U		0.333 U	0.333 U
2-Methymaphthalene	190 (b)	84 (b)	10 (b)	3900 (b)			3-24-3-3		Faller i			0.0067 L			
Acenaphthene	29000	570	20			FALSE TERM VALUE OF	41,000	16,000	mas reski tess tida		_	0.0667 U		0.0667 U	0.0667 U
Acenaphthylene Anthracene	190 (b) 100,000	84 (b) 12,000	10 (b)	390Ó (b)				90,000	60.60			0.0667 U 0.0667 U		0.0667 U 0.0667 U	0.0667 U 0.0667 U
Benzo(a)anthrasene	21	2					27	21	590			0.0667 U		0.0667 U	
Benzo(a)pyrene	0.21	8		125	N 7 6040 17 sector fronting colonidate and rate		0.27	2.1	59			0.0667 U		0.0667 U	0.0667 U
Benzo(b)fluoranthene	2.1	5 5										0.0667 U		0.0667 U	0.0667 U
Benzo(g.h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)								0.0667 U		0.0667 U	0.0667 U
Benzo(k)fluoranthene	21	49	W W	4000			27	210	5900	114.00		0.0687 U		0.0667 U	0.0667 U
bis(2-Ethylhexyl)phthalate Bulylbenzylphthalate	120 100,000	3600 (c) 930		1020 1020 (d)	4.5 4.5 (d)	-						0.0667 U 0.0667 U		0.0667 U = 0.0667 U	0.0667 U 0.0667 U
Carbazole	86	0.6	-	- rozogoj			-					0.0667 U		0.0667 U	0.0667 U
Chrysene	210	160					270	2100	59,000			0.0667 U		0 0667 U	
Dibenz(a,h)anthracene	0.21	2					0,27	2.1	59			0.0667 U		0.0667 U	0.0667 U
Dibenzofuran	1600			0.002			97 ( <del>-</del> 35 (					0.0667 U		0.0687 U	6:0667 U
Diethylphthalate Dimethylphthalate	100,000 100,000	3600 (c)	200 (e)	30,000 (e)	0.45 (e)							0.0667 U 0.0667 U		0.0667 U 0.0667 U	0.0667 U
Di-n-Butylphthalate	62,000	3600 (c) 2300	200 (e) 200	30,000 (e) 30,000	0.45 (e) 0.45			-				0.0667 U	0.0667 U	0.0667 U	0.0667.U 0.0667 U
Di-n-Octyl phthatate	25,000	10,000	200 (e)	30.000 (e)	0.45 (e)							0.0667 U		0.0667 U	0,0667 U
Fluoranthene	22,000	4300					29,000	8900		-		0.0877	9.8	0.0667 U	0.0667 U
Fluorene	26,000	560			30		35,000	12,000		- X		0.0667 U		0.0667-0	0.0667 ∪
Hexachloroethane	120	0.5	procedure constru	c teac apparent of the co	easterner treue vertreue reason			eir ausgesenten er en en en en en en en en en en en en en	-+			0.133 U	0.133 U	0.133 U	0.133 U
Indeno(1,2,3-cd)pyrene	2.1	14. 84	10	3900	= +		2.7	21	590		45	0,0667 U		- 0.0667 U	0.0667 U
Naphthalene Pentachlerophonel	190	= 0.03	10		- 4		770	710	20,000		15	0.0667 U 0.333 U	0.0667 U - 0.333 U	0.0667 U 0.333 U	0.0667 U
Phenanthrene	190 (b)	84 (b)					**	-		**		0.0667 U	2.7	0.0667 U	0.0667 U
Pyrene	29,000	4200					21,000	6700				0.101	11.1	0.0667 U	0,0667 U
SEMIVOLATILES (mg/kg)															1
EPA Method SW8270SIM Acenaphthene	29,000	570	20				41,000	16,000				NA	NA	NA	NA
Acchaphthylone	29,000 190 (b)	84 (b)		-3900 (b) =			41,000	10,000				NA NA	NA NA	NA NA	NA NA
Anthracene	100,000	12,000	-					90,000		THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO PE		NA	NA	NA	NA
Benzo(a)anthracene	2.1	2					2.7	-21	590			NA NA	NA	NA -	NA
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59	<u></u>		NA NA	NA	NA	NA
Benzo(b)fluoranthene	2.1	5	40(1)	2000 (1-)			1					NA.	NA	NA_	NA
Benzo(g,h,i)perylene Benzo(k)fluorantirene	190 (b)	84 (b) 49	10 (b)	3900 (b)			27	210	5900		 	NA NA	NA NA	NA NA	NA NA
Chrysene	210	160					270	2100	59,000			NA	NA NA	NA NA	NA NA
Dibenz(a,h)anihiracehe	0.21	2			5		0.27	2,1	. 59		4.74	NA.	NA	NA.	NA.
Fluoranthene	22,000	4300					29,000	8900		**		NA	NA	NA	NA
Fluorene	26,000	560	7		30		35,000	12,000				- NA	NA.	NA NA	NA:
Indeno(1,2,3-cd)pyrene	2.1	14					2.7	21	590			NA NA	NA NA	NA NA	NA
Naphthalene Phenanthrene	190 190 (b)	84 84 (b)	10	3900			770	710	20,000		15	NA NA	NA NA	NA NA	NA NA
Prienantiliene	29.000	4200					21,000	6700				NA NA	NA NA	NA NA	NA NA
. 200			mades and Tab				21,1000						annes de la constant de la Constant		- The Control of the
CHLORINATED PHENOLS (mg/kg	)	}			1				1	į	- 1				
Method 8040/8270SIM					I				l		I				
Pentachlorophenol	9.0	0.03	3	30	4							NA	NA	NA	NA
l		ı			ľ	I					- 1				

Page 19 of 21

												1-1.5.	1-1.5	1-1.5	1-1-5
						SCREENING O	RITERIA								
			T			l		Risk-	Based Concen			1			
Sample Identification:							Soil Ingestion, D	ermal Contact	and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	LW41S (1-1.5)	LW42S (1-1.5)	LW43S (1-1.5)	LW44\$ (1-1.5)
Laboratory identification:	EPA Regi	ion 9 PRGs		Orego	1 SLVs	Background		Construction	Excavation			0410156-03	0410156-07	0410156-11	0410156-15
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inverts	l	Occupational	Worker	Worker	Occupational	Occupational	10/28/2004	10/28/2004	10/28/2004	10/28/2004
VOLATILES (mg/kg)															
EPA Method SW8260											İ				
1.2,4-Trimethylbenzene	170			3300 (f)			1500	1400	40,000	790	55	NA NA	NA	0.01 UJ	
1,2-Dibromoethane	0.073						0.033	0.25	7.1	1.7	0.000059	NA	NA.	0.01 UJ	
1,3,5-Trimethylbenzene 2-Butanone	70 110.000		_	3300 (f)			1500	1400	40,000		12	NA NA	NA NA	0.01 UJ 0.04 UJ	
4-isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)								NA	NA	0.01 UJ	0.01 UJ
Acetone	54,000	16	200 (a)	1250							an and a second	NA NA		0.1 (0)	
Benzene	1.4	0.03		3300			34	340	9400	48	0.052	NA	NA	0.01 UJ	0.01 UJ
Carbon Disulfide	720	32					10.00					NA	NA-	₩ 0,01 UJ	0.01 UJ
Ethylbenzene	400	13		3300 (t)		THE STATE OF THE S	74,000	28,000		Targetine Vijerman		NA	NA	0.01 UJ	0.01 UJ
Isopropylbenzene	2000	2000		G - AND ADDRESS - COMP.			.51,000	24,000				NA .	NA NA	0.01 UJ	
m,p-Xylene	420 (g)	210 (g)	Roman State (Section 1)	it natitions the		**	24,000 (g)	19,000 (g)				NA NA	NA	0.02 UJ	0.02 UJ
Methyl-lodide Methyl tert-butyl ether	70						760	9000		720	0.30	NA NA	NA NA	NA 0.01 UJ	NA 0.01 UJ
Naphthalene	190	84		3900			770	710	20,000	720	15	NA NA		0.01 UJ	
n-But/Ibenzene	240		FORMET MORNES	3300 (f)		-			20,000			NA NA	NA	0.01 UJ	0.01 UJ
n-Propylbenzene	240	al acids		3300 (f)			19,000	9300				NA .		0.01 UJ	
o-Xylene	420 (g)	210 (g)	1				24,000 (g)	19,000 (g)			100 (g)	NA	NA	0.01 UJ	0.01 UJ
sec-Butylbenzene	220					line i .						NA.		0.01 UJ	
tert-Butylbenzene	390			3300 (f)	ACTOR ACTOR ACTOR ACTOR	AL SECTION AND ADDRESS OF THE PARTY OF THE P						NA NA	NA	0.01 UJ	0.01 UJ
Toluene	520	12	200	1440			68,000	39,000			180	NA .	NA	=0.01 UJ	0,01_UJ
HYDROCARBONS (mg/kg)							ļ								
HTDROCARBONS (Iligikg)															
NWTPH-HCID									1						
Gasoline				No.			22,000	13,000		80,000	110	NA	NA	NA	NA NA
Kerosono							70.000	20.000				NA.	NA =	NA	NA
Diesel Tube Oil						_	70,000	23,000				NA NA	NA NA	NA NA	NA NA
	C State of the last	was the later of t	-	and the second second			Salar Salar Salar Salar	1.21.202			Sept. Sept.				Strategic Control
NWTPH-Dx (mg/kg)									1						
TPH-Diesel Range							70,000	23,000				16.5 U NA	66 NA	36.5 NA	16.7 U
TPH-Kerosene Bange TPH-Motor Oil Range		areti eta maret	-									54.8 U	221	56.6 U	NA 55.5 U
-												54.6 U	221	30.0 0	35.5 0
NWTPH-G (mg/kg)									1						
TPH-Gasoline Range							22,000	13,000		80,000	110	2.74 U	2.84 U	3.54	8.44
PRIORITY POLLUTANT					İ	i									
METALS (mg/kg)									-						
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i) 60 (i)	5 (j)			_			1.72 U	1.52 U	1.56 U	1.72 U
Chromium (6010)	450	38		340,000 (k)		23.1				44		= 14.7 =	26.3	29.2	14.3
Copper (6010)	41,000		100	390	190 <b>50</b>	19.1	-					11.7	21.7	19.3	11.8
Lead (7421)	800		50	4000	16 500	. 9	750	750	750		.30	1.72 U	33	16.6	172 U
Nickel (6010)	20,000	130	30	625	320 200	21.4		-		-		16.4	18.3	18.5	15
Zinc (6010)	_100,000	12,000	50 (n)	20,000	60 (h) 200	60.2						46.2	106	91.9	49,3
Cadmium (6010)	450	8	4	125	6 20							NA	NA	NA	NA NA
Mercury (7471)	310		03	73	16 0.1							NA NA	- NA	NA NA	NA -
804/44/8000 CO. CO. CO. CO. CO. CO. CO. CO. CO. CO.	100						COMMENT OF STREET, STR	errepet tiplet Villagi Set	Service and Conference of the	MANAGEMENT CONTRACTOR					

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Page 21 of 21

													1-1.5	1-1.5	1-1-5	i,1:1.5
							SCREENING (	RITERIA								
			T						Risk	Based Concer	trations		1			
			1								Volatilization to	Leaching to				
Sample Identification:			l					Soil Ingestion,	Dermal Contact	, and Inhalation	Outdoor Air	Groundwater	LW41S (1-1.5)	LW42S (1-1.5)	LW43S (1-1.5)	LW44S (1-1.5)
Laboratory Identification:	EPA Regi	on 9 PRGs		Oregon	SLVs		Background		Construction	Excavation			0410156-03	0410156-07	0410156-11	0410156-15
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	10/28/2004	10/28/2004	10/28/2004	10/28/2004
BETX (mg/kg)																
EPA Method SW8021B																
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	NA	NA	NA	NA
Ethylbenzene	400	13	100	3300 (f)	1 14			74,000	28,000	<b>建设-5</b> 点		Maria	NA.	NA.	NA	NA
Toluene	520	12	200	1440				68,000	39,000			180	NA	NA	NA	NA
Xylenes, Total	420	210	<b>1000年</b>		4.4		7/100	24,000	19.000			100	NA-	NA.	NA.	NA
m.p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)		**		NA	NA	NA	NA.
n-Xylene	420 (g).	210 (g)						24,000 (g)	19,000 (g)			100 (g)	NA.	NA NA	. NA	NA II
DIOXINS AND FURANS (ng/kg)			l				1									
Total TEO								l	••				NA	NA	NA	NA

Pentachlorophenol

0.03

TABLE C-2b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI Page 1 of 15

5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 5-5,5 5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 CF CF SCREENING CRITERIA Risk-Based Concentrations COME COMP Soil Ingestion, Dermal Volatifization to Leaching to Sample Identification: EPA Region 9 Contact, and Inhalation Outdoor Air Groundwater BT-01 (5-6) BT-02 (5-6) BT-03 (5-6) BT-04 (5-6) BT-05 (5-6) BT-06 (5-6) BT-07 (5-6) BT-08 (5-6) BT-09 (5-6) BT-10 (5-6) LW42S (5-5.5) G21 (14-17.5) G22 (12.5-15.5) Laboratory Identification: PRGs Background Excavation 0207040-03 0207040-010 0207040-15 0207059-20 0207040-19 0207059-15 0207040-24 0207040-29 0207059-08 0207059-03 0410156-08 0108208-21 0108215-08 7/9/2002 7/9/2002 Date Collected DAF=20 Worker 7/8/2002 7/8/2002 7/8/2002 7/9/2002 7/8/2002 7/8/2002 7/8/2002 7/9/2002 10/28/2004 8/28/2001 8/29/2001 SEMIVOLATILES (mg/kg) EPA Method SW8270 0.0007 NA 0.333 U 0.330 U 0.330 U 2,6-Dinitrotoluene NA. NA. NA= NA. NA NA. NA HI WE ÑΑ NA III NA 0.0667 U 0.067-U 12.000 2-Methylnaphthalene 84 (b) NA NA 0.0667 U 0.067 U Acenaphthene NA NA NA NA . NA. NA. 0.0667 U 0.067 U Acenaphthylene 84 (6) 0.067 t 12,000 NA NA NA NΑ NA 0.074 1.100 Anthracene Benzo(a)anthracene 590 NA NA NA. NA NA NA .... NA. 0 0667 U 0.067 ( 0.067 U 59 NA NA NA NA 0,0667 U 0.067 L 0.067 U Benzo(a)pyrene Benzo(b)fluoranthene NA NA ... NA NA. NA. NA NA 0.0667 U 0.067 U 0.067 U NA NA NA NA NA NA NA NA 0.0667 U 0.067 U Benzo(g,h,i)perylene 84 (b) 49 NA NA : NA MA. NA-0.0667 U 0 067 U 0.067 U Benzo(k)fluoranthene bis(2-Ethylnexyl)phthalate 3600 (c) NA NA NΑ NA ALA NA NA 0.0667 U 0.067 U 0.071 Butylbenzylphthalate 930 d - 15.00 (5 NA. NA NA NA 0.0667 U 0.067 U 0.067 U NA NA NA NA NA NΔ NΑ NA 0.0667 U 0.067 U Carbazole NA Chrysene 160 NA. NA NA NA NA NA NA. NA. NA 0.0667 U 0.067 U 0.067 U Dibenz(a,h)anthracene NA NA NA NA NA NA NA 0.0667 U 0.067 U 0.067 U Dibenzofurari NA. NA . NA: NA NA NA NA. NA . NA ... NA 0.0667 U #0.067 U Diethylphthalate NA NA NA NA NA NA NA 0.331 0.067 U Dimethylphthalate 3600 (c) NA NΑ NA NA NA NA NA 0:0667 U 0.067 U 0.067 U 2300 NA NA NA NA NA NA NA 0.0667 U 0.067 U 0.067 U Di-n-Butylphthalate Dim Octyl phthalate 10,000 NA NA. NA . NA... NA NΛ NA NA 0.0667 U 0.067 U 0.067 U 4300 NA NA NA NA NA NA NA 0.0667 U 0.067 U luoranthene Fluorene ..... 560 -NA NA 0 NA ---NA · NA ... \_NA NA: NA. 0:0667-U 0.330 0 067. U Hexachloroethane 0.5 NA NA NA NΑ NA NA 0.133 U 0.130 U 0.130 U Indeno(1,2,3-od)pyrene 590 - NA NA-NA≅ NA NA : NA . NA NA NA : 0.0667 U 0.067 U 0.067 U Naphthalene 20,000 15 NA NA NA NA NA NA NA NA 0.0667 U 0.067 U 1.900 0.03 NA. NA. NA NA · NA NA NA 0.333 U 0.330 U 0,330 U Pentachlorophenol 84 (b) NA NA NA NA NA NA NA NA 0.0667 U 0.720 3.900 Phenanthrene NA NA NA NA NA NA 0.067-17 NA: NA ... -NA NA 0.0667 U Pyrene SEMIVOLATILES (mg/kg) EPA Method SW8270SIM 570 NΔ Acenaphthene NA NA Acenaphthylene 84 (b) NA. NA: N/A NA NA: NA NΙΔ NA NA NA . NAδiA. 12,000 NA NA NA NA NA NΔ NA NA NA NA Anthracene CALL A 2 590 NA. NA. NA. NA. NA : - NA N.A NA ... NA. NA. NA. NA. Benzo(a)anthracerie Benzo(a)pyrene 59 NA NA NA NA NA NA NIA NA NA NA NA Benzo(b)fluoranthere - Car NA. NA NA. NA. NA . NA. NA NA. NA-NA NA. 84 (b) NΔ NΔ NA NΑ NA NA NA NΑ NΑ MΑ NΑ NA NA Benzo(g,h,i)perylene Benzo(k)fluoranthene 5900 -NA NA NA ... NA. NA NA. NA. NA: NA NA NA NA: NA 160 59,000 NA NA NΔ NΔ NΔ MA NΔ NΔ NΔ NΔ NΔ NA NΔ Dibenz(a h)anthracene 2 59 NA NA NA NA NA NΙΔ MΔ N/A-NA: MA NA. NA NA Fluoranthene 4300 NA NA NA NΙΔ NA MΑ NA NΙΔ NA NA NA NA NA Fluorene ....... 560 NA: NA: NA. NA NA: NA NA NA NA NA NA -NA . Indeno(1,2,3-cd)pyrene 590 NA NA NA NA NA NA NA NA NA NA NA NA NA R/ 20,000 NA NA NΔ NA NA NA NΔ NΔ MΔ NΔ NA -NA Naphthalene 84 (b) NA NA NΔ NA NA NΑ NA NA NA NA NA NΔ NΔ Phenanthrene NA ... 1200 NA : NA. NA NA NA NA NA. NA NA. NA. NA Pyrene CHLORINATED PHENOLS (mg/kg) Method 8040/8270SIM

7/19/05 \\Edmidata\wprod/231\v09\132\Phill RI 071995\\Phill RI Rpt\_App C BTTF >3

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

C-2b Page 2 of 15

						5-5,5	5-5,5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	CF	CF
			SCREENING CRITERIA														<del> </del>	
				d Concentrations	s	1											COMP	COMP
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1												
Sample identification: Laboratory identification:	EPA Region 9 PRGs	Background	Contact, and Inhalation Excavation	Outdoor Air	Groundwater	BT-01 (5-6) 0207040-03	BT-02 (5-6) 0207040-010	BT-03 (5-6) 0207040-15	BT-04 (5-6) 0207059-20	BT-05 (5-6) 0207040-19	BT-06 (5-6)	BT-07 (5-6) 0207040-24	BT-08 (5-6)	BT-09 (5-6)	BT-10 (5-6) 0207059-03	LW42S (5-5.5) 0410156-08	G21 (14-17.5)	G22 (12.5-15.5)
Laboratory identification: Date Collected:	DAF=20	Background	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/8/2002	0207059-15 7/9/2002	7/8/2002	0207040-29 7/8/2002	0207059-08 7/9/2002	7/9/2002	10/28/2004	0108208-21 8/28/2001	0108215-08 8/29/2001
VOLATILES (mg/kg)		<u> </u>	7101101	- Coopens		7100000	770000		.,	.,				1,012002			1	0.20,200
EPA Method SW8260		1			l													
1.2.4-Trimethylbenzene		_	40,000	790	55	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.001 U	0.079 J
1,2-Dibromoethans			71	1.7	0.000059	- NA-	NA.	NA -	NA NA	NA.	NA.	NA.	NA.	NA.	- NA	NA.	0.001 U	0.001.⊍
1,3,5-Trimethylbenzene			40,000		12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.001 U	
2-Butanone			•			NA.	NA:	NA	NA		NA .	: NA	NA		NA.	NA:	0.005 U	
4-Isopropyltoluene Acetone	12 (a) 16		-	-		NA N <b>A</b>	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.001 U 0.005 U	0.0237 0.005 U
Benzene	0.03	-	9400	48	0.052	NA	NA NA	NA	NA NA	NA.	NA NA	NA	NA.	NA NA	NA NA	NA NA	0.001 U	0.005 U
Carbon Disulfide	32		3400			NA		NA NA	NA.		NA NA	NA.	NA.				0.001 U	0.001 U
Ethylbenzene	13		-			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00960	0.001 U
Isopropylbenzene						NA :	. NA	NA	NA.	NA	. NA	NA .	NA '		NA.	L	0.158	0.027 J
m,p-Xylene Methyl·lodide	210 (g)	-	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.00832 0.001 U	0.00361 J
Methyl tert-butyl ether				720	0.30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0,001 U NA
Naphthalene	84		20,000	720	15	NA NA	NA NA	NA.		NA NA	NA NA	NA NA	NA NA		NA NA	NA.	0.0302	3.420
n-Butylbenzene			-			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.990	0.089 J
n-Propylbenzene		1-111				NA.	. NA	NA	NA .	ŊÄ	NA	NA.	NA	NA NA	NA_	NA _	0.742	0.0591 J
o-Xylene	210 (g)				100 (g)	NA_	NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NANA	0.001 U	0.001 U
sec Britylbergene tert-Butylbengene	10 mars 20 d	354964	in the first		-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.684	0.103 J 0.00764 J
Toluens	12	INCOMES OF THE			180	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA		NA NA		0.00822	0.00764 3
TOIGUIG				Digital Control of the Control of th	100	3.71.1			130								9,0002	U.ODEL1
HYDROCARBONS (mg/kg)																		
NWTPH-HCID																		
Gasoline				80,000	110	21,9 U		22.0 U	22.2 U	21.9 U	22.2 U	21.7 U	21.8 U	22.1 U	21.8 L	J NA	Gasoline	23.5 U
Kerosene						54.8 U		54,9 U									61.0 ⊍	
Diesel						54.8 U	55.1 U	54.9 U	55.6 U	54.8 U	55.4 U				54.4 U		Diesel	Diesel
Lube Oil				and the second		110 U	110 U	110 U	111 U	110 ∪	111 Ų	108 U	109 U	111.0	109 L	I NA	122 U	118 U
NWTPH-Dx (mg/kg)																		
TPH-Diesel Range						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.5 U	1120	6580 J
TPH-Kerosene Bange TPH-Motor Oil Bange						NA NA	NA NA	NA NA	NA NA	NA: NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA 55 U	NA 61.0 U	NA 58.8 U
· .						INA	INA.	INA	INA	INAS	IVA	INA	IVA	INA	INA	55 0	01.00	38.6 U
NWTPH-G (mg/kg)																		
TPH-Gasoline Range			.	000,08	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	162	NA
PRIORITY POLLUTANT					i													
METALS (mg/kg)																	l	
Arsenic (7060)	29	5 (j)				NA.	NA	NA	NA	NA NA	NA_	NA	NA	NA	NA	NA .	2.29	1.5 U
Ohromium (6010)	38	23.1				- NA	NA -	NA.		NA=	NA:		NA -		NA.		12.5	13.7
Copper (6010) Lead (7421)		19.1 9	750		30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	12.2 1.96 U	12.6 1.92 U
Lead (7421) Nickel (6010)	130	21.4	(30		30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1.96 U	1.92.U. 15.8
Zinc (6010)	12,000	60.2				NA NA	NA NA		NA.	NA NA	NA I		NA NA				43.0	40.8
														1800 1800			- State of S	
Cadmium (6010)	8					NA	NA	NA	NA	NA NA	NA	NA.	NA	NA	NA	NA	NA	NA
Mercury (7471)						NA NA	NA NA	NA NA	NA.	NA .	NA NA	NA.	NA NA	NA NA	NA NA	NA	NA.	, NA
i		l	l	I	I												I	

5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 5-5.5 CF CF SCREENING CRITERIA Risk-Based Concentrations COMP COMP Soil Ingestion, Dermal Volatilization to Leaching to Sample Identification: EPA Region 9 Contact, and Inhalation Outdoor Air Groundwater BT-01 (5-6) BT-02 (5-6) BT-03 (5-6) BT-04 (5-6) BT-05 (5-6) BT-06 (5-6) BT-07 (5-6) BT-08 (5-6) BT-09 (5-6) BT-10 (5-6) LW42S (5-5.5) G21 (14-17.5) G22 (12.5-15.5) Laboratory Identification: \_ PRGs Background Excavation 0207040-03 0207040-010 0207040-15 0207059-20 0207040-19 0207059-15 0207040-24 0207040-29 0207059-08 0207059-03 0410156-08 0108208-21 0108215-08 Date Collected: DAF=20 7/8/2002 7/8/2002 7/8/2002 7/9/2002 7/8/2002 7/9/2002 7/8/2002 7/8/2002 7/9/2002 7/9/2002 10/28/2004 8/29/2001 BETX (mg/kg) EPA Method SW8021B 0.03 48 NA NA Benzene 9400 0.052 NA NA 13 NA. NA ... NA . NA NA NA NA NA NA NA. NA NA Ethylbenzene 180 NA NA NA NA NA NA NA NA NA NA NA NA Toluene 12 100 , NA NA. NA NA NA NA NA NA NA NA NA NA. NA NA Xylenes, Total 210 (g) NA NA NA NA NA NA m,p-Xylene 100 (g) o-Xylene 210 (g) NA NA DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA NA NA NA NA NA

Page 3 of 15

TABLE C-2b Page 4 of 15

						CF.	CF	CF :	CF4 60	CF	CE CE	CF	# 1,6 (# <b>CF</b> .5555	CF CF	CF .	en ar est <b>ore</b> stignes, d	CF CF
			SCREENING CRITERIA														
		1		d Concentration	ıs	COMP	COMP	COMP	COMP	COMP	COMP						
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1											
Sample Identification			Contact, and Inhalation	Outdoor Air	Groundwater	G23 (9-14)	G24 (9-15)	G25 (14-17)	G26 (14-15)	G27 (13-15)	BA14 (14-15)	SCH56 (9-10)	SCH56 (15-15.5)	SCH58 (17-18)	SCH59(14-18)	SCH61 (15.6-16.4)	SCH63 (15.7-16.0)
Laboratory Identification	PRGs	Background	Excavation			0108215-04	0108208-09	0108215-12	0108215-16	0108208-13	0108208-16	0110066-D1	0110065-3	0110066-02	0110066-03	0110065-1	0110065-2
Date Collected	: DAF=20		Worker	Occupational	Occupational	8/29/2001	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/28/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001
SEMIVOLATILES (mg/kg) EPA Method SW8270																	
2,6-Dinitrotoluene	0.0007					0.330 U	0.330 U		0.330 U	0.330 U			NA	NA	NA	NA	NA
2-Methylnaphthalene	84 (b)					0.067 U							NA.			NA NA	NA NA
Acenaphthene	570 84 (b)					0.067 U C.067 U	0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.067 U			NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene Anthracene	12,000	-	*			0.067 U	0.067 U		0.330	0.067 U			NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	2 4 2		590			the state of the s				0.067 U			NA NA	NA.	NA		NA NA
Benzo(a)pyrene	8		59			0.067 U	0.067 U		0,410	0.067 ∪			NA.	NA	NA.	NA NA	NA
Benzo(b)flueranthene						0.067.U				0.067 U						NA	
Benzo(g,h,i)perylene	84 (b)		••			0.067 U	0.067 U	0.067 U	0.210	0.067 U	0.067 U		NA	NA	NA	NA	NA
Benzo(k)fluoranthene	. 49		5900			0.067 U	0.067 ⊔		0.300	<sup>/1</sup> 0.067 U			NA.			NA NA	NA .
bis(2-Ethylhexyl)phthalate	3600 (c)					0.067 じ	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U		NA_	NA	NA	NA	NA
Bufylbenzylphthatate	930					0.067 U										NA NA	NA
Carbazole	0.6					0.067 U	0.067 ∪	0.067 U	0.067 U	0.067 U	0.067 U		NA	NA NA	NA	NA NA	NA
Chrysene	160 2		59.000 59		10 mm	0.067 U 0.067 U	0.087 U 0.067 U	0.067 U 0.067 U	<b>0.410</b> 0.067 U	0,067 U 0.067 U	0.067 U 0.067 U		NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene Dibenzofuran	2	-	59				0.067 U		0.067 U	0.067 U			NA NA	NA NA		NA NA	NA NA
Diethylphthalate	3600 (c)		_	-	CONTRACTOR CONTRACTOR	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
Dimethylphthalate	3600 (c)			1007									NA-	NA.		NA NA	.NA
Di-n-Butylphthalate	2300					0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	NA	NA	NA	NA	NA	NA
Di-n-Octyl pothalate	10,000				BE-081-400-681	0.067 U	0.067 U	0.067 U=	0.067 U	0.067 U	0.067 U	NA NA	NA.	NA.	NA.	NA -	. NA
Fluoranthene	4300					0.067 U	0.067 U	0.067 U	1.100	0.067 U	0.067 U		NA	NA	NA	NA	NA
Fjuorene	560			\$700 B		0.360	0.067 U		0.067 U	0,067 U			NA NA	NA	NA.	NA	NA.
Hexachloroethane	0.5			ED 1889 - WARD-OWNER		0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	NA.	NA	NA	NA	NA NA	NA
Indeno(1,2,3-cd)pyrene	14	-	590	4.0 A*		-0.067 U	0.067 U	0.067 U	0.200	0.067 U			. NA	NA.	NA NA	NA	NA
Naphthalene	84 0.03		20,000		15	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.130 U	NA	NA NA	NA NA	NA NA	NA	NA
Pentachiorophenol	84 (b)					0.330 U 0.320	0.330 U 0.067 U	0:330 U 0:067 U	0.330 D 0.780	0.330 U 0.067 U	0.930 U 0.067 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	4200					0.067 U			0.920 J					NA NA	NA NA	NA NA	NA NA
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM				-		Million Commission (Million Commission Commission Commission Commission Commission Commission Commission Commi											
Acenaphthene	570					NA	NA	NA NA	NA	NA	NA	NA	1.6	NA	1.31	0.845	0.474
Acenaphthylene	64 (b)					NA.	NA .		NA .	NA	NA =	NA =	0.511	NA NA	0,408	0.209	0.146
Anthracene	12,000 2		590			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1.05 0.02	NA NA	0.594 0.0122	0.352 0.0365	0.367 0.0266
Benzo(a)anthracene Benzo(a)pyrene	8		59			NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	0.00667 U		0.00667 U	0.0244	0.011
Benzo(b)fluoranthene	5					NA.	NA.	NA.	NA	NA.	NA NA	NA NA	0.00667 U		0.00667 U		0.0113
Benzo(g,h,i)perylene	84 (b)			-		NA NA	NA	NA	NA	NA	NA	NA	0.00667 U		0.00667 U	0.0119	0.00869
Benzo(k)fluoranthene	49		5900			NA NA	NA NA	NA .	NA-	NA NA	NA NA	NA NA	0.00667 U	NA-	0.00667 U	0.00692	0.00667 U
Chrysene	160	-	59,000			NA	NA	NA	NA	NA	NA	NA	0.02	NA	0.0166	0.0261	0.0194
Dibenz(a,h)anthracene	2		59	- 100		NA	NA -	NA .	NA NA	NA	, NA	NA.	0.00687 U		0.00667 U	0.00667 U	0.00667 U
Fluoranthene	4300		-			NA NA	NA.	NA	NA	NA	NA NA	NA_	0.196	NA NA	0.0898	0.0861	0.0885
Fluorene	560					NA NA	NA	NA	NA.		. NA	NA .	6.52	NA	4.99	2.69	1.89
Indeno(1,2,3-cd)pyrene	14		590		COMMENTS OF THE STREET	NA	NA	NA	NA	NA_	NA NA	NA NA	0.00667 U	NA NA	0.00667 U	0.00808	0.00667 U
Naphthalene	84		20,000	* #	15	NA NA	NA.	NA	NA NA	NA "	NA.	NA.	16,6	NA NA	0.462	2.49	0.16
Phenanthrene	84 (b)		-		ngan sampangan an	NA NA	NA NA	NA NA	NA NA	NA •14	NA NA	NA NA	10.3	NA NA	7.9	3.77	4.11
Pyrene:	4200		****	A		INW	NA.	199	NA NA	NA .	NA NA	NA	0.465	NA	0.298	0.153	0.169
CHLORINATED PHENOLS (mg/kg Method 8040/8270SIM Pentachlorophenol	0.03					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA
,	İ			i													

7/19/05 \\Edmdata\\wproc\231\009\132\PhiII RI 071905\PhiII RI Rpt\_App C BTTF >3

TABLE C-2b

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL:

Page 5 of 15

BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						A CF AC	on order	CF.	CF.	CF	CF	Parace (*)	Notes (CF) and the	CF		CP-10-10	. CEC.
			SCREENING CRITERIA						<del></del>								
				d Concentration	s	COMP	COMP	COMP	COMP	COMP	COMP						
		1	Soil Ingestion, Dermal	Volatilization to	Leaching to												
Sample Identification:		1	Contact, and Inhalation	Outdoor Air	Groundwater	G23 (9-14)	G24 (9-15)	G25 (14-17)	G26 (14-15)	G27 (13-15)	BA14 (14-15)	SCH56 (9-10)	SCH56 (15-15.5)	SCH58 (17-18)	SCH59(14-18)	SCH61 (15.6-16.4)	SCH63 (15.7-16.0)
Laboratory Identification:	PRGs	Background	Excavation			0108215-04	0108208-09	0108215-12	0108215-16	0108208-13	0108208-16	0110066-01	0110065-3	0110066-02	0110066-03	0110065-1	0110065-2
Date Collected:	DAF=20		Worker	Occupational	Occupational	8/29/2001	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/28/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001
VOLATILES (mg/kg)																	
EPA Method SW8260		1															
1,2,4-Trimethylbenzene	++		40,000	790	55	0.001 L	0.00274	0.001 U	0.001 U	0.001 U	0.001 U	I NA	0.133 J	NA	0.00618 J	5.94 J	0.0104
1,2-Dibromoethane			7.1	1.7	0.000059	0.001 L	7 0 001 U	0.001 U	0.001/U	0.001 U	= 0.001 U	I NA	- 0:01 U	J NA	0,002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene			40,000		12	0.001 U			0.001 U				0.1 U		0.002 U	3.83 J	0.00682
2 Butanone					32-7-7	0.005 L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 (	I NA	0.005 U	J NA	0.005 U	0.005 U	0.005 U
4-Isopropyltoluene	12 (a)	-	-			0.001 U			0.001 U				0.24 J	NA NA	0.002 U	0.552 J	0.001 U
Acetone	16			2. 200 March (1)	9.2	0.005 L									0.0212 U		
Benzene	0.03		9400	48	0.052	0.001 U			0.001 U		0.001 L		0.001 U		0.001 U	0.001 U	
Carbon Disulfide	32					0.001 L			0.001 U				0.001 U		0.001 U		
Ethylbenzene	13				-	0.0256 J	0.001 U		0.001 U		0.001 U		0.01 U		0.00538 J	0.0388 J	0.00916
Isopropylbenzene		4.0				4.350 J			0.001 U		0.001 t				2.16 J	0.866 J	
m,p-Xylene	210 (g)	e seemen				0.023 J	0.002 U		0.002 U		0.002 U		0.02 U		0.0148 J	0.0503 J	0.0282
Methyl lodide						0.001 U			0.001 U				D 000 U		0.001 U		0.001 U
Methyl tert-butyl ether			70 700	720	0.30	NA 0.0173 J	NA 0.010 U	NA Pages	NA	NA	NA 0.040.1	NA	NA O of of the	NA NA	NA STOR	NA .	NA .
Naphthalene	84	Section 2	20,000		15	5.740 J	0.010 U 0.002 U	0.010 U 0.002 U	0.010 U 0.002 U		0.010 U 0.004 U		21,8 J 7,56 J	NA NA	0.0568		
n-Butylbenzene n-Propylbenzene		-				5.740 J 0.170 J					0.004 U				7.22 J 7.5 J	2.94 J 3.54 J	5.44 4.74
o-Xvlene	210 (g)				100 (g)	0.001 U		0.001 U	0.001 U		0.001 U		29.3 .0 0.01 U		0.002 U	0.002 U	0.002 U
sec-Butylbenzene	210 (9)				100 (g)	0.001 U			0.001 U		0.001 0				3.06 ds		2.12
tert-Butylbenzene						0.001 U		0.001 U	0.001 U		0.001 U		0.329 J	NA NA	0.0211 J	0.001 U	0.0108
Tolvene	12			n.	180	0.0227 J			0.001 U				0.01 U		0.0211 J	0.0172 J	
(Ciberia L. L. L. L. L. L. L. L. L. L. L. L. L.				NO. AND THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IN COLUMN TO THE PERSON NAMED IN COLUMN TO	100	U.ULLI U	CONT.	0.941-0	0.001.0		30000				0.0110	0.0112.0	THE PARTY OF
HYDROCARBONS (mg/kg)					1												
,																	
NWTPH-HCID					l i												
Gasoline				80,000	110	23.0 U		22.7 U	23.5 U		23.0 U		8750 J	NA	NA	<b>3230</b> J	4620 J
Kerosene						Kerosene	61.0 U				57.5 U		250 U	NA.		50 0 U	
Diesel	 					57.5 U		56.8 U	58.8 U		57.5 U		13200 J	NA NA	NA NA	4270 J 100 U	6120 J 100 U
Lube Oil		100		F. & 18		1-0-0	122 U	114 U	116 U	. 116 U	115 U	NA.	500 U	- IVA	-144	TUU Q	100 0
NWTPH-Dx (mg/kg)																	
TPH-Diesel Range						17.2 U		NA	NA	17.4 U	NA NA	17.2 L	12700 J	18.5 U	10200	5650 J	9070 J
TPH-Kerosene Range					2000	4880	NA:	NA NA	- NA	592	NA	NA NA	NA.	-NA	NA.	NA NA	NA NA
TPH-Motor Oil Range		-	**			57.5 U	NA	NA	NA	58.1 U	NA	57.5 L	275 U	61.7 U	275 U	64.1 U	294 U
NWTPH-G (mg/kg)																	
TPH-Gasoline Range				80,000	110	NA	NA	NA	NA	NA	NA	2.87 U	NA	3.09 U	1410	NA	NA
Ti ti-dadille riango				00,000	'''	1471		107	1471		1474	2.07	1411	0.00 0	1410	147	11/5
PRIORITY POLLUTANT																	
METALS (mg/kg)		!															
Arsenic (7060)	29	5 (i)				2.68	2.44	2.23	2.39	2.08	2.44	NA	NA	NA	NA	NA	NA
Chromlum (6010)	38	23.1				12.9	14.4	19.4	15.6	13.2	14.5	NA NA		NA NA	NA	NA NA	NA
Copper (6010)	**	19.1				16.0	13.2	13.1	13.6	12.2	12.6	NA	NA	NA	NA	NA	NA
Lead (7421)		0.116	760		30	1.75 U		1 75 U	1.89 U	1 92 U	1.85 U	NA.	NA	NA	NA.	NA NA	NA
Nickel (6010)	130	21.4	-			14.7	16.7	19.4	15.8	15.3	16.6	NA	NA NA	NA	NA	NA	NA
Zinc (6010)	12,000	60.2				39.8	42.3	47.8	46.1	42.1	44.4	NA _	NA NA	NA.	NA NA	- NA	NA.
Cadmium (6010)	8		Ed - 400minus husbankus Disesser -47770 -7740 -77			NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA NA	NA
Mercury (7471)		-	* * * * * * * * * * * * * * * * * * * *			NA .	NA.	NA.	NA	. NA	NA.	NA NA	NA.	NA NA	NA NA	NA	NA
Ţ			ļ		<b> </b>												

7/19/05 \\Edmdata\wproct/231\009\132\Phill RI 071905\Phill RI

						CF	or of or	* * * CF	o sa <b>c</b> e vi h	es or cer	****** <b>CF</b> : **	· CF \(\alpha\)	CF	CF	CE A	CF.	en en <b>ce</b> llange
			SCREENING CRITERIA					•									
•			Risk-Base	ed Concentrations		COMP	COMP	COMP	COMP	COMP	COMP						
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1											
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	G23 (9-14)	G24 (9-15)	G25 (14-17)	G26 (14-15)	G27 (13-15)	BA14 (14-15)	SCH56 (9-10)	SCH56 (15-15.5)	SCH58 (17-18)	SCH59(14-18)	SCH61 (15.6-16.4)	SCH63 (15.7-16.0)
Laboratory Identification:	PRGs	Background	Excavation			0108215-04	0108208-09	0108215-12	0108215-16	0108208-13	0108208-16	0110066-01	0110065-3	0110066-02	0110066-03	0110065-1	0110065-2
Date Collected:	DAF=20		Worker	Occupational	Occupational	8/29/2001	8/28/2001	8/29/2001	8/29/2001	8/28/2001	8/28/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/9/2001
BETX (mg/kg)						l											
EPA Method SW8021B																	
Benzene	0.03		9400	48	0.052	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	13	EXAME:				- NA	- NA	NA:	- NA	NA NA	NA.	NA NA	NA	NA=	NA	NA=	NA
Toluene	12			-	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	210			5 Sec. 5-2	100	NA.	NA.	NA :	NA NA	. NA	NA:	NA.	NA.	NA NA	NA NA	NA.	NA.
m,p-Xylene	210 (g)		-			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	210 (9)				100 (g)	NA.	NA NA	. NA	NA.	= NA	NA.	NA NA	NA.	NA P	NA.	NA NA	NA
DIOXINS AND FURANS (ng/kg)																	
Total TEQ						NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 6 of 15

## TABLE C-2b

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						CF	CF CF	CF	CF	30,090 ( <b>cf</b> .0),4	an at the <b>Ce</b> th As	::::::::::::::::::::::::::::::::::::::	CF - CF	CF .	OF A	CF
			SCREENING CRITERIA											WELL .		
				ed Concentration		1										
Orașele Idealffeeli	ED4 D' 0		Soil Ingestion, Dermal	Volatilization to		DT 04 (0 40)	DT 04 (40 5 44 5)	DT 00 (0.40)	PT 00 (44.45)	DT 00 (0.40)	DT 04 (0 40)	DT 04 40 5 40 5)	D7 05 10 40	DT OF MAAR	ST 44 40 40)	DT 00 (1.1.18)
Sample Identification Laboratory Identification		Background	Contact, and inhalation Excavation	Outdoor Air	Groundwater	BT-01 (9-10) 0207040-04	BT-01 (13.5-14.5) 0207040-05	BT-02 (9-10) 0207040-11	BT-02 (14-15) 0207040-012	BT-03 (9-10) 0207040-16		BT-04 (12.5-13.5) 0207059-22	BT-05 (9-10) 0207040-20	BT-05 (14-15) 0207040-21	BT-06 (9-10) 0207059-16	BT-06 (14-15) 0207059-17
Date Collected		Duckground	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002
SEMIVOLATILES (mg/kg)	1														-=	
EPA Method SW8270																
2,6-Dinitrotoluene	0.0007					NA.	NA.	NA	NA	NA		NA	NA	NA NA	NA	NA
2-Methylnaphthalene Acenaphthene	84 (b) 570					NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA III
Acenaphthylene:		1112				NA.	NA NA	NA NA		NA NA		NA NA			NA NA	NA NA
Anthracene	12,000		-	**		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
Benzo(a)anthracene	2		590			NA NA		NA		NA.		NA NA	NA NA			NA .
Benzo(a)pyrene	8		59	 		NA	NA NA	NA NA	NA	NA		NA NA	NA.	NA	NA	NA
Benzo(b)fluoranthene Benzo(g,h,i)perviene	5 84 (b)	 				NA NA	NA.	NA NA	NA: NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene	49		5900			NA.	NA NA	NA.				NA.	NA.	NA.	NA NA	
bis(2-Ethylhexyl)phthalate	3600 (c)					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzyiphthalate	930					· · · · · · · NA	NA-	, NA	NA.	NA NA		NA.	NA NA		NA .	
Carbazole	0.6 160					NA NA	NA	NA	NA	NA		NA	NA NA	NA	NA NA	NA
Chrysene Dibenz(a,h)anthracene	160		59,000 59	-		NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Dibenzofuran			39			NA NA	NA NA	NA NA	NA NA	NA.		NA I	NA WA			NA NA
Diethylphthalate	3600 (c)					NA	NA	NA	NA	NA		NA	NA	NA	NA	NA
Dimethylphthalate	3600 (c)						NA .	NA.		NA.			The special contraction of the special contracti	" NA."	NA.	NA
Di-n-Butylphthalate Di-n-Octyl phthalate	2300					NA	NA	NA	NA	NA		NA .	NA NA	NA	NA	NA
Fluoranthene	10,000 4300					NA NA	NA.	NA NA	NA NA	- NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	560					NA.	NA.	NA NA		NA.		NA NA	NA NA	, IVA		
Hexachloroethane	0.5	-	-			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3 cd)pyrene			590	200	建设装置	NA.	NA NA		NA	NA.				NA NA	NA	
Naphthalene	84		20,000	ASSTUTERED NEW TOTAL CONT.	15	NA NA	NA NA	NA NA	NA NA	NA.		NA NA	NA NA	NA	NA	NA
Pentachlorophenol Phenanthrene	0.03 84 (b)					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA. NA	NA NA
Pyrene	4200					NA NA	NA NA			NA.		NA NA	NA NA	NA.		NA NA
THE PROPERTY OF THE PROPERTY O	- 200-100-100-100-100-100-100			removed backsamic res	3.0713	0.000 (10-100) \$44-100 (10-100) -4		230-100-000-000-00	- acc - acc - com-com-com-com-com-						- Character and the Character and Character	AMPERICATION COMMISSION CO.
SEMIVOLATILES (mg/kg)																
EPA Method SW8270SIM Acenaphthene	570				_	NA	0.0067 U	NA	NA	NA	0.00667 Uu	NA	NA	0.927 J	NA	0.028
Acenaphthylene	84 (5)		-			NA NA	0.0007 U	NA NA	NA NA	NA.	0.00667 U.		NA NA	0.487	NA NA	0:0313
Anthracene	12,000					NA	0.0067 U	NA	NA	NA	0.00667 UJ		NA	0.267 J	NA	0.00667 U
Benzo(a)anthracene	2		590							NA.		. NA	NA	0.00733 J		
Benzo(a)pyrene	8 5		69			NA NA	0.0067 U 0.0067 U	NA	NA NA	NA NA	0.036 J	NA NA	NA	0.00667 UJ		0.00667 U
Benzo(b)fluoranthene Benzo(g,h,i)perylene	84 (b)		-		-	NA NA	0.0067 U	NA NA	NA NA	NA NA	0.05 J 0.036 J	NA NA	NA NA	0.00667 UJ 0.00667 UJ		0 00667 U 0 00667 U
Benzo(k)fluoranthene	49		5900			NA NA	0.0067 U	NA.	NA :	NA.		NA S		0.00667 UJ		0.00667 U
Chrysene	160		59,000		)	NA	0.0067 U	NA	NA	NA	0.024 J	NA	NA	0.014 J	NA	0.00667 U
Dibenz(a,h)arithracene	2		59			NA .	0.0067 U		NA.	NA.		NA NA	NA.	0.00667 UJ		0.00667 U
Fluoranthene	4300 					NA NA	0.0067 U 0.0067 U	NA NA	NA A.A	NA NA	0.0293 J 0.00667 EU	NA NA	NA NA	0.113 J 2.59 J	NA NA	0.00667 U
Fluorene Indeno(1,2,3-ad)pyrene	14		590	-	_	NA NA	0.0067 U	NA NA	NA NA	NA NA	0.03 J	NA NA	NA NA	0.00667 UJ		0.0873 0.00667 U
Naphthalene	94		20,000		15	NA.	0.0067-U			NA.		NA NA		0.407 UJ		0.239
Phenanthrene	84 (b)	-	-	-		NA	0.0067 U	NA	NA	NA	0.00867 J	NA	NA NA	4.78 J	NA	0.028
Pyrene	4200					NA NA	0.0067. U	NA.	NA NA	NA.	0.0707 J	NA.	NA.	0.107 J	NA .	0.90667 U
CHLORINATED PHENOLS (mg/kg	,															
Method 8040/8270SIM	′			i	ļ											
Pentachlorophenol	0.03	1	-		[	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ľ	I	ı		ļ	- 1											

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#### TABLE C-2b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						CF	nd of group of	CF	CF C	CF :	CF CF	CF CF	CF :	A CE OF	CF CF	CF \
			SCREENING CRITERIA	,												
				ed Concentrations	8	1										
			Soil Ingestion, Dermal	Voiatilization to	Leaching to	1										
Sample Identification:		1	Contact, and Inhalation	Outdoor Air	Groundwater	BT-01 (9-10)	BT-01 (13.5-14.5)	BT-02 (9-10)	BT-02 (14-15)	BT-03 (9-10)	BT-04 (9-10)	BT-04 (12.5-13.5)	BT-05 (9-10)	BT-05 (14-15)	BT-06 (9-10)	BT-06 (14-15)
Laboratory Identification:	PRGs	Background	Excavation			0207040-04	0207040-05	0207040-11	0207040-012	0207040-16	0207059-21	0207059-22	0207040-20	0207040-21	0207059-16	0207059-17
Date Collected:	DAF=20	ļ	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002
VOLATILES (mg/kg)		İ	1	1	i											
EPA Method SW8260						ļ										
1,2,4-Trimethylbenzene			40,000	790	55	NA NA	NA	NA_	NA	NA	NA NA	NA	NA.	NA	NA NA	NA NA
1,2-Dibromoethane			7.1	1,7	0.000059	:NA	NA NA	NA NA	NA.			NA	NA NA	NA.	NA NA	NA.
1,3,5 Trimethylbenzene			40,000		12	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA NA	NA
2-Butanone	er affect	Section Control				NA NA	NA.	NA I		NA NA	NA NA	NA NA	NA .		NA.	NA NA
4-Isopropyltoluene	12 (a)					NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Acetone	16					THE STATE OF THE S	NA.	NA .		NA		NA NA			NA	NA
Benzene Carbon Disulfide	0.03		9400	48	0.052	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA Na	NA NA	NA	NA
	32				and the	NA.		Contract of the last of the la					All the second sections in the	THE RESERVE TO CALL THE	NA.	CONTRACTOR OF THE PROPERTY OF THE PERSON OF
Ethylbenzene Isopropylbenzene	13					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
m,p-Xylene	210 (g)					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA	NA NA
Methyl tedide	210 (9)						NA NA	NA NA		NA NA	NA NA	NA NA	NA-	NA NA		NA NA
Methyl tert-butyl ether			-	720	0.30	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA
Naphthalene	84		20,000	720	15	NA	NA NA	NA NA	NA NA	NA.	NA NA				NA NA	NA NA
n-Butylbenzene	-					NA NA	NA NA	NA	NA	NA NA	NA NA	NA	NA.	NA NA	NA NA	NA NA
n-Propylbenzene						NA NA	NA NA	NA.	NA NA	NA NA		NA.	NA NA			NA NA
o-Xylene	210 (g)		-		100 (g)	NA.	NA	NA	NA	NA.	NA	NA	NA	NA.	NA	NA
sec Butylbenzene				E E L'A		NA NA	NA NA	- NA	NA =	NA NA	NA.		NA.	NA	NA	NA
tert-Butylbenzene						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	12	<b>化学设置</b>			180	NA:	NA:	. NA		NA:	NA NA		NA.	NA NA	NA NA	NA.
10000 - 1000 - 1 Shirt and a s	2.2.0.00															
HYDROCARBONS (mg/kg)																
NWTPH-HCID		1														
Gasoline				80.000	110	22.9 U	NA.	22.4 U	24.1 U	22.2 U	22.4 U	23.0 U	22.4 U	NA	22.4 U	NA
Kerosene						57.3 U		55.9 U	60.2 U			57.5 U			- 55.9 U	
Diesel						57.3 U		55.9 U	60.2 U		Diesel	57.5 U	55.9 U		55.9 U	NA
Lube Oil						145 U	NA:	112 U			Lube Oil	115 U	112 U	- NA	112 U	NA
NWTPH-Dx (mg/kg)							204	NA	NA		445		***		NA	400
TPH-Diesel Range TPH-Kerosong Range		-				NA NA	301 NA	NA NA	NA NA	NA NA	115 NA	NA NA	NA NA	6200 NA	NA NA	198 NA
TPH-Motor Oil Range				AND THE PERSON NAMED IN		NA NA	86.9	NA NA	NA NA	NA NA	1070	NA NA	NA NA	99.0	NA NA	61.0 U
TPH-MOIOI OII Range				_	**	INA	00.9	NA.	NA	INA	1070	INA	INA	99.0	INA	61.00
NWTPH-G (mg/kg)					J											
TPH-Gasoline Range				80,000	110	NA.	2.76 U	NA	NA	NA	NA	NA	NA	715	NA	1160
PRIORITY POLLUTANT																
METALS (mg/kg)																
Arsenic (7060)	29 - 38	5 (j) 23 1				NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
Chromium (6010) Copper (6010)	30	19.1				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Copper (6010) Lead (7421)		9	750		30	NA NA	NA NA	NA NA	NA NA	NA NA		NA T		NA NA	NA NA	NA NA
Nickel (6010)	130	21.4				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA
Zinc (6010)	12,000	60.2				NA.	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NAP ==
		NAME OF TAXABLE PARTY OF TAXABLE				14(3						Control of the Contro	MAN CONTRACTOR			
Cadmium (6010)	8		-			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marcury (7471)		2.005		100 100 400 100	-		: NA	NA.	NA NA	NA NA	NA	NĀ	NA.	NA .		NA.
			SERVICE RECEIVED TO THE PROPERTY OF THE PROPER	CORD + 1000 - 121/CERT - 12E/1044	CHILD SELF- (\$65 - Call)					AND THE RESERVE OF THE PARTY OF	todaditi ana appenditar manaraman				ESPERANCE CONTRACTOR SERVICES VICES	AND DESCRIPTION OF THE PARTY OF

### Page 9 of 15

#### TABLE C-2b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						GF .	Y CF F GA	CF.	CF	e i jar CF = i isa	CF .	CF CF	# <b>CF</b> 1355	CF CF	· · · CF · · ·	<b>CF</b>
			SCREENING CRITERIA													
			Risk-Base	d Concentrations												
			Soil Ingestion, Dermal	Volatilization to	Leaching to											
Sample Identification:	EPA Region 9	•	Contact, and Inhalation	Outdoor Air	Groundwater	BT-01 (9-10)	BT-01 (13.5-14.5)	BT-02 (9-10)	BT-02 (14-15)	BT-03 (9-10)	BT-04 (9-10)	BT-04 (12.5-13.5)	BT-05 (9-10)	BT-05 (14-15)	BT-06 (9-10)	BT-06 (14-15)
Laboratory Identification:	PRGs	Background	Excavation			0207040-04	0207040-05	0207040-11	0207040-012	0207040-16	0207059-21	0207059-22	0207040-20	0207040-21	0207059-16	0207059-17
Date Collected:	DAF=20		Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002
BETX (mg/kg)																
EPA Method SW8021B																
Benzene	0.03		9400	48	0.052	NA.	0.0276 U	J NA	NA	NA	NA	NA	NA	0.0275 U		0.0305 U
Ethylbenzene	13					- NA-	0.110 U	I NA	NA .	NA.	NA I	NA NA	NA.	0.552	NA .	1.33
Toluene	12				180	NA	0.110 U	J NA	NA	NA	NA	NA NA	NA	0.110 U		0.410
Xylenes, Total	210			107 Te 14	100	NA .	0.331 L	I NA	NA.	NA NA	N/A	NA.	NA NA	1:02	NA.	1.67
m,p-Xylene	210 (g)					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene o-Xylene	210 (g)				100 (g)	NA.	NA	- NA	NA -	NA .	NA	T NA	NA NA	NA NA	NA NA	NA.
DIOXINS AND FURANS (ng/kg)		-				NA	NA NA	NA.	NA.	NA.	NA	NA.	NA	NA	NA.	NA
Total TEQ				-		NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	

TABLE C-2b Page 10 of 15

## SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						· CF	CF %	CF CF	CF .	CF -	G. CF	or of	(ii. 1) - <b>CF</b> (iii. ii.	CF -	CF CF	CF CF
			SCREENING CRITERIA			ł										
		1		d Concentration	s	1										
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1										
Sample Identification:	EPA Region 9	ļ.	Contact, and Inhalation	Outdoor Air	Groundwater	BT-07 (9-10)	BT-07 (12.5-13.5)	BT-08 (9-10)	BT-08 (13.5-14.5)	BT-09 (9-10)	BT-09 (13.5-14.5)	BT-10 (9-10)	BT-10 (13.5-14.5)	G21-3(13-14)	LW28S (12-13)	LW28S (12-13)
Laboratory Identification:	PRGs	Background	Excavation			0207040-25	0207040-26	0207040-30	0207040-31	0207059-09	0207059-10	0207059-04	0207059-05	0207087-01	0309163-02	0310011-05
Date Collected:	DAF=20		Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	7/9/2002	7/9/2002	7/11/2002	9/23/2003	10/1/2003
SEMIVOLATILES (mg/kg)	[	T														
EPA Method SW8270																
2.6-Dinitrotoluene	0.0007		_			NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	84 (b)	to the same of			10.7541.51	NA.	NA -	NA NA	NA -	NA.	NA NA	NA.	NA.		· · · · · · · · NA	NA
Acenaphthene	570			-	-	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	84 (b)				DESERTED BY	NA.	NA NA	NA .	NA.	NA.	NA NA	NA NA	NA NA	NA.	NA .	NA
Anthracene	12,000				-	NA.	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA
Berizo(a)anthracene	2		590			NA.		NA.	NA L	NA.		NA	NA_	NA .	NA_	NA
Benzo(a)pyrene	8	-	59			NA	NA NA	NA	NA NA	NA.	NA NA	NA_	NA	NA	NA	NA
Benzo(b)fluorantherie	5 5					- NA	NA NA	NA	NA.	. NA		NA	NA .	NA `	.NA	NA:
Benzo(g,h,i)perylene	84 (b)					NA.	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	49		5900			NA:		NA NA	NA NA	NA:		NA		NA.		NA.
bis(2-Ethylhexyl)phthalate	3600 (c)					NA NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA NA	NA NA	NA NA
Butylbenzylphthalate	930				100	NA.					NA .	NA.		NA.	NA I	NA NA
Carbazole	0.6		59,000	-	-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene Dibenz(a.h)anthracene	160 2		59,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	AND THE RESERVE OF THE PARTY OF		29			NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Diethylphthalate	3600 (c)	The Part of the Pa				NA.	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA.	NA NA	NA NA
Dimetry/phthalate	3600 (c)					NA.	NA NA	NA_	NA NA	NA.		NA NA	NA.	NA NA	NA .	NA.
Di-n-Bulylphthalate	2300				-	NA.	NA	NA NA	NA NA	NA NA	NA	NA NA	NA	NA	NA NA	NA
Di-n-Octy phthalate	10,000					NA.	NA .	NA	NA NA	NA.		NA NA			ŊΔ	NA NA
Fluoranthene	4300		-	Secretary and the second		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	560	didina.				. NA	NA NA	NA	L NA	NA	NA.	NA.	NA NA	NA.	NA NA	NA
Hexachloroethane	0.5		***			NA	NA.	NA	NA NA	NA	NA.	NA	NA.	NA	NA	NA
Indeno(1,2,3-od)pyrene	14		590			NA-		NA NA		NA.		NA NA	· NA	NA_	NA.	A/A
Naphthalene	84		20,000		15	NA.	NA	NA	NA NA	NA	NA_	NANA	NA	NA_	NA NA	NA
Pentachloropheno	0.63					NA-		NA .	NA NA	NA NA		NA	NA NA	NA.	NA_	NA
Phenanthrene	84 (b)			TO THE RESIDENCE OF THE PARTY O		NA	NA	NA	NA	NA	NA NA	NA	NA	NA.	NA	NA
Pyrene	4200			2.5.91		NA NA	NA	NA.	NA	NA NA	NA NA	NA.	. NA	NA	NA NA	NA NA
SEMIVOLATILES (mg/kg)																
EPA Method SW8270SIM																
Acenaphthene	570					NA	NA .	NA	0.00667 U	NA	NA	NA	NA	NA	0.00667 U	0.00667 U
Acenaphthylene	84 (b)	19				- AA		NA.	0.00667 U		NA	NA NA	NA NA	NA NA	0.00687 U	
Anthracene	12,000					NA	NA	NA	0.00667 U	NA	NA	NA	NA	NA	0.00667 U	0.00667 U
Benzo(a)anthracene	2		590			- NA	NA NA	NA :	0.00667 U				NA .	NA.	0.00667 U	0.00667 U
Benzo(a)pyrene	8		59	THE STREET STREET		NA NA	NA	NA	0.00667 U 0.00667 U	NA NA	NA NA	NA NA	NA	NA NA	0.00667 U	0.00667 U
Benzo(b)fluoranthene	5					NA NA	NA NA	NA NA	0.00667 U	NA NA	NA NA	NA NA	NA NA	NA NA	0.00667 U 0.00667 U	0.00667 U 0.00667 U
Benzo(g,h,i)perylene Benzo(k)fluoranthene	84 (b) 49		5900			NA NA		NA NA	0.00667 U	NA NA	NA NA			NA NA	0.00667 U	
Chrysene	160		59,000			NA NA	NA NA	NA NA	0.00667 U	NA NA	NA NA	NA	NA NA	NA NA	0.00667 U	0.00667 U
Dipenzfa,h)anthracene	2		59	B		AM	NA NA	NA NA	0.00667 ⊍	NA.		NA NA		NA.	0.00007 U	0.00667 IJ
Fluoranthene	4300		Kell 1900 Feller Heller Schuller Gestern Beller			NA	NA	NA	0.00667 U	NA	NA	NA	NA	NA	0.00667 U	0.00667 U
Fluorene	560					NA.	NA J		0.00667.U			- NA	NA NA	NA.	0.00667 U	0.00667 U
Indeno(1,2,3-cd)pyrene	14	**	590			NA	NA	NA	0.00667 U	NA	NA	NA	NA	NA	0.00667 U	0.00667 U
Naphthalene	84		20,000		15	NA NA	NA .	NA.	0,00667 U	- NA	· NA	NA NA	NA	NA NA	0.00667 U	0.00687 ⊎
Phenanthrene	84 (b)		A+			NA	NA	NA	0.00667 U	NA	NA	NA	NA	NA	0.00667 U	0.00667 U
Pyrene	4200					NA.	NA NA	. NA	0.00667 U	NA	NA NA	NA .	NA NA	NA NA	0.00667 U	0.00067 U
CHLORINATED PHENOLS (mg/kg	,															
Method 8040/8270SIM	′ l															
Pentachlorophenol	0.03					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
·	ļ			l	ļ											

Page 11 of 15

## TABLE C-2b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						CF	· CF A	CF.	······································	CF	CF	- An <b>CF</b> : VAS	Principles	CF .	CF	· CF
			Soil Ingestion, Dermal	ed Concentration Volatilization to	Leaching to											
Sample Identification: Laboratory Identification:	EPA Region 9 PRGs	Background	Contact, and Inhalation Excavation	Outdoor Air	Groundwater	BT-07 (9-10) 0207040-25	BT-07 (12.5-13.5) 0207040-26	BT-08 (9-10) 0207040-30	BT-08 (13.5-14.5) 0207040-31	BT-09 (9-10) 0207059-09	BT-09 (13.5-14.5) 0207059-10	BT-10 (9-10) 0207059-04	BT-10 (13.5-14.5) 0207059-05	G21-3(13-14) 0207087-01	LW28S (12-13) 0309163-02	LW28S (12-13) 0310011-05
Date Collected:	DAF=20	<u> </u>	Worker	Occupational	Occupational	7/8/2002	7/8/2002	7/8/2002	7/8/2002	7/9/2002	7/9/2002	7/9/2002	7/9/2002	7/11/2002	9/23/2003	10/1/2003
VOLATILES (mg/kg) EPA Method SW8260																
1,2,4-Trimethylbenzene	-		40,000	790	55	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.01 U
1,2-Dibromoethane 1,3,5-Trimethylbenzene	-		7.1 40,000	17	0.000059 12	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.01 L NA	0.01 U 0.01 U
2:Bulanone			40,000		12	NA.			NA NA		NA NA	NA NA	NA NA	U SA NA	NA NA	
4-Isopropyltoluene	12 (a)			-		NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA
Acetone Benzene	16 0.03		9400	48	0.052	NA. NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Carbon Disuffide	32					NA.	NA NA	NA	NA	NA .	ii ii	NA.	NA NA	NA.	NA.	NA NA
Ethylbenzene	13		-			NA	NA	NA NA	NA	NA PG	NA	NA	NA	NA	NA NA	0.01 U
isopropylbenzene m,p-Xylene	210 (g)	- 1 10 M				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.01 U 0.02 U
Methyl louide		266 C.W				NA.	NA NA	NA S	NA NA	NA NA	NA NA	NA.		NA .	NA '	
Methyl tert-butyl ether	84		20,000	720	0.30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA	10 L	
Naphthalene n-Butylpenzene	- 64		20,000		15	NA NA	NA NA	NA. NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
n-Propylbenzene						NA_	NA.	NA I	NA.	NA.	NA	NA NA	NA.	NA NA	· NA	0.01 U
o-Xylene sec:Butylbenzene	210 (g)		-		100 (g)	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	0.01 U
tert-Butylbenzene						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluené	12				180	□ _ NA.	, NA	NA_	NA.	NA		NA NA		NA.	NA !	
HYDROCARBONS (mg/kg)																
NWTPH-HCID																
Gasoline				80,000	110	22.4 l		22.5 U	NA	22.1 U		21.8 U		24.2 U		NA NA
Kerosene Diesel		-				55.9 L 55.9 L		56.2 U 56.2 U	NA NA	55.3 U 55.3 U		54.4 U 54.4 U		60.5 U 60.5 U		NA NA
Lube Oil						112:1		36.2 U	NA U			109 U		121 U		NA NA
NWTPH-Dx (mg/kg)							townstee with miles again.		THE RESIDENCE OF THE PARTY OF T							
TPH-Diesel Range						NA NA	NA	NA	17.9 U		NA	NA	NA	NA	17.9 U	
TPH-Kerosene Hange						NA NA	NA NA	NA NA	NA SO	NA	NÁ	NA	NA.	NA NA		
TPH-Motor Oil Range	-	-	-	-	**	NA	NA	NA	59.7 U	NA	NA	NA	NA	NA	59.7 U	60.5 U
NWTPH-G (mg/kg) TPH-Gasoline Range				80.000	110	NA	NA	NA	2.98 U	NA	NA	NA	NA	NA	2.98 U	3.66
				00,000	110	14/4	110	1925	2.00 U	1974	iv.A	11/4	1874	146	2.90 U	3.00
PRIORITY POLLUTANT	ĺ															
METALS (mg/kg) Arsenic (7060)	29	5 (j)	***			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromiem (6010)	38	23.1				NA NA	NA.	NA	NA.	NA _	NA NA		NA	NA.	NA :	NA
Copper (6010) Lead (7421)	5-1-4	19.1 9	750		30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA .	NA J 242 U
Lead (7421) Nickel (6010)	130	21.4	/ov			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	1.67 U NA	U 242 U NA
Zinc (6010)	12,000	60.2				IP NA	NA	NA	NA NA	NA NA		NA.		NA.	NA .	NA.
Codmium (6010)	8					NA	N/A	NA	NA	N/A	N/A	N/A	NA	818		
Cadmium (6010) Mercury (7471)	8		-	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
							er seer comment to a different Asia room	The second secon	edications Co., 600 dec., to the C., Salar, p. sepapel., j. gibliothi	er - warrens in teamer (IAC-112-22-22-2						

CF CF CF CF CF - 45 - 15 CF - 15 - 15 CF -SCREENING CRITERIA Risk-Based Concentrations Soil Ingestion, Dermal | Volatilization to | Leaching to Sample Identification: EPA Region 9 Contact, and Inhalation Outdoor Air Groundwater BT-07 (9-10) BT-07 (12.5-13.5) BT-08 (9-10) BT-08 (13.5-14.5) BT-09 (9-10) BT-09 (13,5-14.5) BT-10 (9-10) BT-10 (13.5-14.5) G21-3(13-14) LW28S (12-13) LW28S (12-13) Laboratory Identification: Date Collected: 0207040-25 0207040-31 7/8/2002 PRGs Background Excavation 0207040-26 0207040-30 0207059-09 0207059-10 0207059-04 0207059-05 0207087-01 0309163-02 0310011-05 DAF=20 7/8/2002 7/8/2002 7/9/2002 7/9/2002 7/9/2002 7/9/2002 7/11/2002 Worker 9/23/2003 10/1/2003 BETX (mg/kg) EPA Method SW8021B Benzene 0.03 9400 0.052 0.0298 U 0.0298 U NA . NA NA 0.119 U Ethylbenzene 13 ......NA .NA NA NA =NA.:-0.119 U Toluene 12 180 NA 0.119 U NA NA NA NA NA 0.119 U Xylenes, Total 210 100 NA .... NA NA 0,358 U NA NA. NA NA NA NA 0.358 U m,p-Xylene 210 (g) NA NA NA NΑ NA NA NA NA 100 (g): 210 (g) NA NA NA NA NA NA NA NA. NA NA DIOXINS AND FURANS (ng/kg) Total TEQ NA NΑ NA NΑ NA NA NA NA NA NA NA

Page 12 of 15

Page 13 of 15

#### TABLE C-2b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						TO SIGN - TO -	(a) - CF(i)	CENTRAL STATE	CF.	CF	CF -	CF	::::: <b>::::::::::::::::::::::::::::::::</b>	a como <b>or</b>
			SCREENING CRITERIA											
				ed Concentration	s	İ								
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1								
Sample Identification:	EPA Region 9		Contact, and inhalation	Outdoor Air	Groundwater	LW29D (15-16)	LW30S (13.5-14.5)	LW31S (15-16)	LW32D (13.5-14.5)	LW33S (13.5-14.5		LW42S (13-14)		LW44S (12.5-13.5)
Laboratory Identification:	PRGs	Background	Excavation			0309163-01	0309137-01	0310011-06	0310041-02	0310041-01	0410156-05	0410156-09	0410156-13	0410156-17
Date Collected:	DAF=20		Worker	Occupational	Occupational	9/22/2003	9/19/2003	10/1/2003	10/2/2003	10/2/2003	10/28/2004	10/28/2004	10/28/2004	10/28/2004
SEMIVOLATILES (mg/kg) EPA Method SW8270		İ												
2,6-Dinitrotoluene	0.0007			 1: (58:::::::::::::::::::::::::::::::::::		NA NA	NA NA	NA NA	NA NA	NA NA	0.333 U	0.333 U	0.333 UJ	0.333 U
2:Methylnaphthalene Acenaphthene	84 (b) 570					NA NA	NA NA	NA NA	NA NA	NA NA	0.0667 ⊍ 0.0667 U	0.0667 U 0.0667 U	0.0667 UJ 0.0667 UJ	0.0667 U 0.0667 U
Acenaphthylene	84 (b)					NA NA	NA NA	NA.	NA NA	NA NA	0.0667 U	0.0667 U		0.0667 U
Anthracene	12,000					NA NA	NA	NA	NA NA	NA.	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Benzo(a)anthracene	2		590			NA.	NA NA	NA NA	NA NA	'NA	0.0667 U	0 0667 U	0.0667 UJ	0.0667 U
Benzo(a)pyrene	8		59			NA.	NA NA	NA	NA NA	NA NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Benzo(b)flugranthene	5					NA .	NA NA	NA 4	NA NA					0.0667 U
Benzo(g,h,i)perylene	84 (b)				SAUTE TRANSPORTED HIS	NA	NA	NA	NA_	NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Benzo(k)fluoranthene	49		5900	46.20		NA NA	. NA	NA	NA .	NA	0.0667 U	0.0667 U		
bis(2-Ethylhexyl)phthalate Butylbenzylphthalate	3600 (c) 930		 		-	NA NA	NA NA	NA NA	NA NA	NA NA	0.19 0.0667 U	0.0667 U 0.0667 U	0.0667 UJ 0.0667 UJ	0.159 0.0667 U
Carbazole	0.6			-		NA NA	NA NA	NA NA	NA NA	NA NA	0.0667 U	0.0667 U	0.0667 U	0.0667 U
Chrysene	160		59.000			NA NA	NA NA	NA NA	NA NA	NA.	0.0667 U	0.0667 U	0.0667 UJ	0.0567 U
Dibenz(a,h)anthracene	2		59	-	44100 2000 40454444	NA	NA	NA	NA NA	NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Dibenzofuran				0.00 4. 100	40.00	NA NA	NA	NA NA	NA.	NA NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Diethylphthalate	3600 (c)					NA.	NA	NA	NA	NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Dimethylphthalate	3600 (c)					NA .	NA	NA.	NA	NA -	0.0667 U	0.0667 ህ	0:0667 UJ	0.0667 U
Di-n-Butylphthalate	2300				SETHERUS VELICION CONTRA	NA	NA	NA	NA	NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Di-n-Octyl phthalate	10,000			7		NA .		NA	ŅĄ	NA NA	0.0667 U	0.0667 U	0.0667 UJ	
Fluoranthene	4300					NA	NA	NA NA	NA	NA	0.0667 U	0.102	0.0667 UJ	0.0667 U
Fluorene	560 0.5					NA	NA NA	NA NA	NA NA	NA NA	0,0667 U 0.133 U	1.46 0.133 U	0.0867 UU 0.133 UJ	<b>0.284</b> 0.133 U
Hexachloroethane Indeno(1,2,3-cd)pyrene	0.5 14	THE RESERVE OF THE PARTY OF THE	590		-	NA NA	NA NA	NA NA	NA NA	NA NA	0.0667 U	0.133 U	0.133 UJ 0.0687 UJ	
Naphthalene	84		20.000		15	NA NA	NA NA	NA NA	NA NA	NA	0.0667 U	0.0667 U	0.0667 UJ	0.0667 U
Pentachlorephenol	0,03					NA.	NA	NA NA	NA.	NA NA	0333 U	0,833 U	0.333 U	0.333 U
Phenanthrene	84 (b)					NA	NA	NA	NA	NA	0.0667 U	2.98	9.05 J	0.215
Pyrene	4200					NA.	NA NA		NA NA	NA:	6.0667 U	0,127	0.0667 UJ	0.0667 U
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM														
Acenaphthene	570					0.00667 U	1.28	0.00667 U	0.251 J	0.00667 UJ		NA	NA	NA
Acenaphthylone Anthracene	84 (b) 12,000	Tata ba				0.00667 U 0.00667 U	1:49 0.545	0.00667 U 0.00667 U	0.105 J 0.0427 J	0.00733 J 0.129 J	NA. NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	12,000		590			0.00667 U	0.545 0.0133 U	0.00667 U		0.129 J		NA NA	NA NA	NA NA
Benzo(a)pyrene	8		59			0.00667 U	0.0133 U	0.00667 U	0.008 J	0.0673 J	NA	NA NA	NA	NA NA
Benzo(b)fluoranthene	5					0.00667 U	0 0133 U	0.00667 U	0.00867 J		NA.	NA.	NA	NA.
Benzo(g,h,i)perylene	84 (b)				en hydgistell mennymen tyr i	0.00667 U	0.0133 U	0.00667 U	0.00667 U.		NA	NA	NA	NA
Benzo(k)fluoranthene	49		5900	and the second	100	0.00667 U	0.0139 U	0.00667 U	0.00667 U.	0.0227 J	NA	NA .	NA NA	NA:
Chrysene	160		59,000		-	0.00667 U	0.0133 U	0.00667 U	0.00733 J	0.048 J	NA	NA	NA	NA
Dibenz(a,h)anthracene	2		59		<b>SETE</b>	0.00667 U	0.0193 U		0,00667 U.		NA =	NA NA	NA	NA NA
Fluoranthene	4300			and a second second second		0.00667 U	0.0613	0.00667 U	0.0227 J	0.148 J	NA NA	NA	NA	NA
Fluorene	560					0.00667 U	3,33	0.00667 U	0,349 .i	0.00733	NA	NA L		NA
Indeno(1,2,3-cd)pyrene	14		590	-		0.00667 U	0.0133 U	0.00667 U	0.00667 UJ		NA NA	NA	NA	NA NA
Naphthalene Phenanthrene	84 84 (b)		20,000		15.	0.00667 L 0.00667 L	0.624 5.29	0 00667 U 0 00667 U	2,24 J 0,288 J	0.00667 UJ 0.107 J	NA	NA NA	NA NA	NA NA
Prienanthrene Pyrene	84 (b) 4200		-			0.00667 U		0.00667 U	0.288 J 0.0373 J	0.107 J	NA NA	NA NA	NA NA	NA NA
T-YOUR TO THE REAL PROPERTY.	W-200					U,00007 U	WITT .	U.UUUUY U	VU313 0	9.100.0	INO.	- INM	THE PART OF THE PA	- SI-ULLIAN IN THE STATE OF THE
CHLORINATED PHENOLS (mg/kg) Method 8040/8270SIM Pentachlorophenol	0.03				_	NA	NA	NA.	NA	NA	NA	NA	NA	NA .
	1	]	[											1

TABLE C-2b Page 14 of 15

## TABLE C-2b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: BELL TERMINAL TANK FARM AREA (>3 FT) PHASE III RI

						CF.	Mar. S. CF	CF CF	in in <b>CF</b>	OF	* * CF	GENERAL CENTRAL	CF · · ·	ind th <b>ce</b> ast we
			SCREENING CRITERIA											
				d Concentrations		1								
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1								İ
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	LW29D (15-16)	LW30S (13.5-14.5)	LW31S (15-16)	LW32D (13.5-14.5)	LW33S (13.5-14.5)	LW41S (16-17)	LW42S (13-14)	LW43S (13-14)	LW44S (12.5-13.5)
Laboratory Identification:	PRGs	Background	Excavation			0309163-01	0309137-01	0310011-06	0310041-02	0310041-01	0410156-05	0410156-09	0410156-13	0410156-17
Date Collected:	DAF=20		Worker	Occupational	Occupational	9/22/2003	9/19/2003	10/1/2003	10/2/2003	10/2/2003	10/28/2004	10/28/2004	10/28/2004	10/28/2004
VOLATILES (mg/kg)														
EPA Method SW8260														
1,2,4-Trimethylbenzene			40,000	790	55	NA.	NA	0.01 U	0.01 U	0.01 U	NA	0.01 UJ	0.01 UJ	0.01 UJ
1,2-Dibromoethane	() (K:		7.1	1.7	0.000059	0.01 U		0.01 U	0.01 U		NA NA	0.01 UJ		
1,3,5-Trimethylbenzene			40,000		12	NA NA	NA	0.01 U	0.86 J	0.01 U	NA	0,01 UJ	0.01 UJ	0.01 UJ
2-Butanone			40,000			NA.		NA.	NA	= NÁ		0.01 UJ		0.04 U.J
4-fsopropyltoluene	12 (a)					NA NA	NA	NA NA	NA NA	NA NA	NA	0.01 UJ	0.01 UJ	0.01 UJ
Acetone	12 (a)					NA I		NA NA	NA NA	NA NA		0.01 UJ		0.01 0.0
Benzene	0.03		9400	48	0.052	NA NA	NA	0.01 U	0.01 U	0.01 U	NA NA	0.01 UJ	0.01 UJ	0.01 UJ
Carbon Disulfide	32		3400		0.002	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	0.01 03		
Ethylbenzene	13		-			NA NA	NA NA	0.01 U	0.01 U	0.01 U	NA NA	0.01 UJ	0.0224 J	0.01 UJ
Isopropulbenzene	10	4.84.8				NA NA	NA NA	0.01 U		0.01 U	NA "	0.01 0J	0.0224 J	3.95 J
m.p-Xylene	210 (g)		-	-		NA NA	NA NA	0.02 U	0.02 U	0.02 U	NA NA	0.02 UJ	0.0357 J	0.0312 J
Melhyl lodide	210 (g)			24 10 1		NA NA	NA NA	NA NA		NA NA	NA NA	0.02 00 NA	0.0337 3	
Methyl tert-butyl ether	-			720	0.30	10 U	10 U	10 U	10 U	10 U	NA.	0.01 UJ	0.01 UJ	0.01 UJ
Nachthalene	84		20.000	720	15	NA NA	NA NA	NA C	NA NA	NA NA	NA NA	0.044 J		0.01 UU
n-Butylbenzene	-		EVANOR DE LES		The state of the s	NA NA	NA NA	NA	NA NA	NA NA	NA NA	1.17 J	5.46 J	0.206 J
n-Propylbenzene			+ 1			NA NA	NA.	00101		0.01 U	NA NA	0.471 J	10.9 J	
o-Xviene	210 (g)				100 (g)	NA.	NA	0.01 U	0,01 U	0.01 U	NA	0.01 UJ	0.0322 J	0.01 W
sec-Bulylbenzene	210 (g)			(8)	100 (9)	NA NA	NA L	NA		NA NA	NA.	0.193 J	2.1 J	
tert-Butylbenzene				SUSPERIOR STREET		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.01 UJ	0.0512 J	0.0329 J
Toluene	12				180	NA NA	NA NA		0.0136		NA.	0.01 UJ		0.0329 J
Loidetta			#71071#71## N#** ***		1107	-			THE RESERVE OF THE PARTY OF THE	V.V1.V			0.0250 0	0.0173
HYDROCARBONS (mg/kg)														i
,,														
NWTPH-HCID														
Gasoline			were annual responsibility and a responsibility	80,000	110	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA
Kerosene						NA.		NA	NA .	NA	NA		NΑ	NA =
Diesel			42-1886-2001-1-888-1-8-1			NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA
Lube Oil						NA.	NA NA	NA NA	- NA	NA	ÑΑ	NA	NA NA	- NA
NWTPH-Dx (mg/kg)	1	[			- {									1
TPH-Diesel Range						18.1 U	6260 J	18.4 U	6450	82.4	16.8 U	4750 J	15100 J	3500
TPH-Kerosene Hange	7.95 B 27					NA NA	NA .		NA NA	NA NA	NA.	NA NA	NA NA	NA NA
TPH-Motor Oil Range				The state of the s	- 175-1740	60.4 U	55 U	61.3 U	57.6 U	175	56 U	54.5 U	293 U	59 U
ů l	i				l	22 0			20			00	200 0	
NWTPH-G (mg/kg)														
TPH-Gasoline Range				80,000	110	3.02 U	<b>1880</b> J	3.07 U	4200 J	3.16 U	2.8 U	705	2330	10800
				1	l									1
PRIORITY POLLUTANT														i i
METALS (mg/kg)														
Arsenic (7060)	29	5 (j)				NA	NA NA	NA	NA	NA	2.21	1.61 U	1.56 U	1.79 U
Chromium (6010)	38	23.0	* *	-141-3		NA NA	NA NA	NA .	NA	NA NA	13	12.4		12.1
Copper (6010)		19.1		TOTAL CONTRACT		NA	NA	NA	NA NA	NA	11.2	10.8	12.2	11.8
Lead (7421)		0	750		30	1.85 U.		2,45 U /	167 U	2.25 U	1.61 ∪	1.61 U=	1 56 U	
Nickel (6010)	130	21.4		Land Area, Mills Street		NA	NA NA	NA NA	NA	NA	12.1	12.1	14.4	12.8
Zinc (6010)	12,000	60.2				NA NA	NA NA	NA	NA NA	, NA	44.1	42,2	47.3	43.8
	_ 1			1	1									
Cadmium (6010)	8		-0764 -00-00-00-00-00-00-00-00-00-00-00-00-00			NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA
Mercury (7471)				- 10		NA .	ŅĀ	NA NA	NA	NA NA	NA	NA NA	NA NA	NA.
		ı J	1	ı	- 1									I

Page 15 of 15

						CF	CF.	CF .	G - CF Probable	CF CF	CF	AT CETT	AND PICE - 1	hi uking <b>CF</b> Wydein i
			SCREENING CRITERIA											
•			Risk-Base	d Concentrations		1								
			Soil Ingestion, Dermal	Volatilization to										
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	LW29D (15-16)			LW32D (13.5-14.5)				LW43S (13-14)	LW44S (12.5-13.5)
Laboratory Identification:	PRGs	Background	Excavation			0309163-01	0309137-01	0310011-06	0310041-02	0310041-01	0410156-05	0410156-09	0410156-13	0410156-17
Date Collected:	DAF=20		Worker	Occupational	Occupational	9/22/2003	9/19/2003	10/1/2003	10/2/2003	10/2/2003	10/28/2004	10/28/2004	10/28/2004	10/28/2004
BETX (mg/kg)														
EPA Method SW8021B														
Benzene	0.03		9400	48	0.052	0.0302 U	0.0275 U	NA	NA	NA	NA	NA	NA	NA.
Ethylbenzene	13					0.121 U	0.759	NA .	NA NA	NA _	NA	NA.	NA NA	· - NA
Toluene	12		-		180	0.121 U	0.304	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	210	St. 45 42 11 11			100	0.362 U	3,21	NA NA	NA.	NA.	NA .	NA.	NA -	NA.
m.p-Xylene	210 (g)					NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	210 (9)				100 (g)	NA.	NA.	NA	NA NA	NA	NA .	= NA	NA	
DIOXINS AND FURANS (ng/kg)														1
Total TEQ						NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 1 of 3

## TABLE C-3a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: LOADING RACK/ENTRANCE AREA (0-3 FT) PHASE III RI

											0-0,5	1-1,5	141.5	1-1,5	141.5	14.5	145	1-1.5	1-1.5
					SCREENING (	RITERIA													
							Risk-	Based Conce	ntrations Volatilization to	Leaching to	4	COMP	COMP	COMP		COMP			
Sample (dentification:					1	Soil Ingestion, D			Outdoor Air	Groundwater	LW7\$ (0-0.5)	G1 (1-1.5)	G4 (1-1.5)	G5 (1-1.5)	BA2 (1-1.5)	BA3 (1-1.5)	BA4 (1-1.5)	BA5 (1-1.5)	BA6 (1-1.5)
Laboratory Identification: Date Collected:	EPA Region 9 PRGs Industrial DAF=20	Plante	Oregon SL Mammals	_Vs Birds Inverts	Background	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	S037C 03/17/97	0108189-01 8/24/2001	0108182-13 8/23/2001	0108189-04 8/24/2001	0108172-29 8/22/2001	0108182-01 8/23/2001	0108182-04 8/23/2001	0108182-08 8/23/2001	0108182-10 8/23/2001
SEMIVOLATILES (mg/kg)	industrial DAI ≈20	Fidrits	Waltimals	Dirus iliverta		Occupational	WOING	WORKE	Occupational	Оссоранона	GOLLIVE	0/24/2001	0/23/2001	0/24/2001	0/22/2001	0/23/2001	6/23/2001	6/23/2001	0/23/2001
EPA Method SW8270																			
2,6-Dinitrotoluene 2-Methylnaphthalene	620 <b>0.0007</b> 190 (b) 84 (b)	200 (a)	) 1440 (a) 3900 (b)					-		-	NA NA	0.330 U 0.067 U		0.330 U = 0.067 U	0.330 U 0.067 U			0.330 U 0.067 U	
Acenaphthene	190 (b) 84 (b) 29000 570	20	- asuu (0)	-	-	41,000	16,000		-	-	NA NA	0.067 U		0.067 U	0.067 U			0.067 U	
Acenaphthylene	190 (b) 84 (b)	-10 (b)	3900 (b)	Section 1							NA.	0.067.0	0.067 U	0.067 U	0.067 U	0.067 L	0.067 U	0.067 U	0.067 U
Anthracene Benzo(a)anthracene	100,000 <b>12,000</b>					27	90,000 21	590			NA NA	0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.067 U			0.067 U	0.067 U 0.067 U
Benzo(a)pyrene	0.21 8		125			0.27	2.1	59			NA.	0.067 U	0.067 U	0.067 U	0.067 U			0.067 U	0.067 U
Benzo(b)fluoranthene	2.1 5										NA NA	0.067 U			0,067 U			0.067 U	
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b) 84 (b) 21 49	10 (b)	3900 (b)			27	210	5900			NA NA	0.067 U 0.067 U	0.067 U	0.067 U 0.067 U	0.067 U 0.067 U			0.067 U 0.067 U	0.067 U 0.067 U
bis(2-Ethylhexyl)phthalate	120 3600 (c)			4.5		-			4-		NA	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Butylbenzylphthalate Carbazole	100,000 930 86 <b>0.6</b>		1020 (d) 4	l.5 (d)							NA NA	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U			0.067 U 0.067 U	0.067 U 0.067 ∪
Chrysene	210 150				2.0 20	270	2100	59 000			NA NA	0.067 U		0.067 U	0.067 U			0.067 U	
Dibenz(a,h)anthracene	<b>0.21</b> 2				The contract of the contract of the	0.27	2.1	59			NA	0.067 U	0.067 U	0.067 U	0.067 U			0.067 U	0.067 U
Dibenzofuran Diethylphthalate	1600 100.000 3600 (c)	200 (e)		45 (e) ·-	LE DESCRIPTION			-			NA NA	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0,067 U 0.067 U			0.067 U 0.067 U	0.067 U 0.067 U
Dimethylphthalate	100,000 3600 (c)	200 (8)									NA.	0.067 U	0.067 U	0.067 U	0.057 U			0:067 U	
Di-n-Butylphthalate	62,000 2300	200		0.45				er eller substratiliser e		 9857:3945:388:386.3	NA NA	0.067 U	0.067 U	0.067 U	0.067 U			0.067 U	0.067 U
Di-n-Getyl phthalate Fluoranthene	26,000 10,000 22,000 <b>4300</b>	200 (e)	30,000 (e) 0.	45 (e)		29,000	8900				NA NA	0.067 U 0.067 U	0,067 U- 0,067 U	0.067 U 0.067 U	0.067 U 0.067 U			0.230 0.067 U	0.067 U 0.067 U
Fluorene	26,000 560			30		95,000	12,000				NA NA	0 067 U	0 067 U	0.067 U	0.067 ∪	0,067 U	0 007 U	0.067 U	0.067 U
Hexachloroethane Indeno(1.2.3-cd)pyrene	120 <b>0.5</b>	Water The S			-	27	 21	590		-	NA NA	0.130 U 0.062 U	0.130 U 0.067 U	0.130 U 0.067 U	0.130 U 0.067 U		0.130 U - 0.067 U	0.130 U 0.067 U	0.130 U 0.067 U
Naphthalene	190 84	10	3900			770	710	20,000	-	15	NA NA	0.067 U	0.067 U	0.067 U	0.130 U		0.130 U	0.130 U	0.130 U
Pentachlorophenol	9.0 0.03	3	90	AL - LOUIS MANAGEMENT TO THE STREET	6			**			NA NA	0.330 U		0.330-U	6.330 U			O.330 U	0.330 U
Phenanthrene Pyrene	190 (b) 84 (b) 29,000 4200					21,000	6700		-		NA NA	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U		0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U
W. Sakke. Lawrence. 1870 Cost No. Communication and Cost Cost Cost Cost Cost Cost Cost Cost	20,000	8 E - 2 Mer 284				21,000													4.00.0
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270SIM Acenaphthene	29.000 570	20	_	_		41,000	16,000				0.0075 U	NA.	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	190 (b) 84 (b) =	10 (b).	3900 (b) = =	- (*)		# # E B B					0.0076 U	NA .	NA.	NA	NA NA			NA NA	NA NA
Anthracene Benzo(a)enthracene	100,000 <b>12,000</b>					27	90,000 21	 590			0.014	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	0.21 8		125			0.27	2.1	59			0.052	NA	NA	NA	NA NA	NA.	NA NA	NA	NA NA
Benzo(b)fluoranthene	2.1 5				-		- 1 - 2				0.051 0.068	NA-	NA NA	NA.	NA	NA NA	NA NA	NA .	NA.
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b) 84 (b) 21 49	10 (b)	3900 (b)			27	210	5900			0.068	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	210 <b>160</b>					270	2100	59,000			0.038	NA	NA	NA	NA NA	NA	NA	NA NA	NA
Dibenz(a;h)anthracene Fluoranthene	0.21 2 22.000 4300		- 14 min 1	os.		.0,27 29.000	2.1 8900	59			0.012 0.062	NA NA	NA NA	NA. NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	26,000 4300 26,000 560			30		35,000	12,000				0.0075 U	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene	2.1 14					2.7	21	590	-		0.064	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene Phenanthrene	190 84 190 (b) 84 (b)	10	9900			770	710	20,000	1.2	16	0.0075 U - 0.023	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrana Pyrana	29,000 4200					21,000	6/00				0.058	NA.	NA.	NA.	NA NA	NA.	NA NA		NA NA
OU ODINATED DUENOUS : "																			
CHLORINATED PHENOLS (mg/kg) Method 8040/8270SIM	,										İ								
Pentachlorophenol	9.0 0.03	3	30	4			**		~-		0.011 J	NA	NA	NA	NA	NA	NA	NA	NA
1		1		ı					ı	I	j								1

7/19/05 \\Edmdata\wprock231\009\132\Phill RI 071905\Phill RI 0

Page 2 of 3

## TABLE C-3a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: LOADING RACK/ENTRANCE AREA (0-3 FT) PHASE III RI

													0-0.5	1-1.5	1-1.5	1-1.5	1-1,5		1-1,5	1-1.5	1-1.5
г						SCB	REENING C	DITEDIA		_ <del>-</del>				ļ						****	
-			1			1	ILLINIA O	MILINA	Risk-	Based Conce	ntrations			COMP	COMP	COMP		COMP			
						ļ					Volatilization to	Leaching to									
Sample Identification:						i .		Soil Ingestion, D			Outdoor Air	Groundwater	LW7S (0-0.5)	G1 (1-1.5)	G4 (1-1.5)	G5 (1-1.5)	BA2 (1-1.5)	BA3 (1-1.5)	BA4 (1-1.5)	BA5 (1-1.5)	BA6 (1-1.5)
Laboratory identification: Date Collected:	EPA Regi-	DAF=20	Plants	Oregon : Mammals		Diverts Bac	ckground	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	5037C 03/17/97	0108189-01 8/24/2001	0108182-13 8/23/2001	0108189-04 8/24/2001	0108172-29 8/22/2001	0108182-01 8/23/2001	0108182-04 8/23/2001	0108182-08 8/23/2001	0108182-10 8/23/2001
	moustrial	UAF=20	Piants	Marninals	Dilus in	iverts		Occupational	worker	worker	Occupational	Occupational	03/17/97	0/24/2001	6/23/2001	6/24/2001	8/22/2001	0/23/2001	6/23/2001	6/23/2001	0/23/2001
VOLATILES (mg/kg)			l																		1
EPA Method SW8260 1.2.4-Trimethylbenzene	170		١	3300 (f)				1500	1400	40.000	790	55	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 L	0.001 U	0.001 U	0.001 U
1.2-Dibromoethane	0.073			3300 (1)				0.033	0.25	7.1	17	0.000059	NA	0.001 U		0.001 U	0.001 U			0.001 U	0.001 U
1,3,5-Trimethylbenzene	70	-		3300 (f)				1500	1400	40,000		12	NA	0.001 U		0.001 U	0.001 U			0.001 U	0.001 U
2-Butanone	110,000												NA NA	0.005 U	0.005 U		0.005 U	0:005 t		0.005 U	0.005 U
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)			POLICE COMPLETE		er tot votenser montest				NA	0.001 U		0.001 U	0.001 U			0.001 U	0.001 U
Acetone	54,000	- 16		1250					242	0.400	40		NA NA	0,016	0.005 U	0.005 U	0 050 U			0.005 U	
Benzene Carbon Disulfide	1.4 720	0.03 32		3300	 			34	340	9400	48	0.052	NA NA	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001-U	0.001 U 0.001 U		0.001 U 0.001 U	0.001 U 0.001 U
Ethylbenzene	400	13		3300 (f)				74,000	28,000				NA NA	0.001 U		0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Isopropylbenzene	2000							51,000	24,000				NA -	0.001 U		0.001 U	0.001.U			0.001 U	0.001 U
m,p-Xylene	420 (g)	210 (g)		**		4-		24,000 (g)	19,000 (g)	CHICKS HOSSING VARIOUS	**		NA	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Methyl lodide						-							NA	= 0.001 U		0.001 U	0.001 U				
Methyl tert-butyl ether	70			3900				760	9000	-	720	0.30	NA	NA.	NA	NA	NA	NA	NA NA	NA	NA
Naphthalene n-Butvibenzene	190 240	84	10	3900 3300 (f)		-	-	770	710	20,000		15	NA NA	0.010 U	0.010 U 0.002 U	0.010 U 0.002 U	0,010 U 0,002 U	0.010 U 0.002 U		0.010 U 0.002 U	0.010 U 0.002 U
n-Progylbenzene	240	No we		3300 (f)			-	19,000	9900				NA NA	0.002 U		0.002 0	0.002 U				0.002 U
o-Xylene	420 (g)	210 (g)	1	-				24,000 (g)	19,000 (g)	-		100 (g)	NA NA	0.001 U	0.001 U	0.001 U	0.001 ∪	0.001 U		0.001 U	0.001 U
sec-Butylbenzene	220			3300 (f)									NA NA	0.001 U	0.001 U	0.001 U	0 001 U	0.001 U	0.001 U	0.001: U	0.001 U
tert-Butylbenzene	390			3300 (f)			*-						NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Tolgene	520	12	200	1440				68,000	39,000			180	NA -	0 001 U	0.001-U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001. U
HYDROCARBONS (mg/kg)																					
, , ,																					
NWTPH-HCID												440			04.7.11	04.711	00.511		00 = 11	04 = 11	
Gasoline Keroseric	i-latares							22,000	13,000	-	80,000	110	NA NA	23.0 U 57.6 U	21.7 U 54.3 U	21.7 U 54.3 U	22.5 U 56.2 U			21.7 U 54.3 U	22.2 U - 55.6-U
Diesel		**		-				70,000	23,000				NA NA	57.5 U	54.3 U	54.3 U	56.2 U	54.9 U		54.3 U	55.6 U
Lube Oil	Mary Andrew							THE PARTY				PER ENGL	NA	155 U		109 U	112 U				111 U
NWTPH-Dx (mg/kg)																					
TPH-Diesel Range								70,000	23,000				16	NA	NA	NA	NA	NA	NA	NA	NA .
TPH-Kerosene Range			48.8	19 (4.86)									NA NA	NA.	NA NA	NA.	NA NA	NA NA	N/A		NA
TPH-Motor Oil Range		**							OLIGANIZATION INCOME.	**			NA	NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)							- 1														
TPH-Gasoline Range								22,000	13,000		80,000	110	5.0 U	NA	NA	NA	NA	NA	NA	NA	NA NA
						Ì			•		<i>'</i>										
PRIORITY POLLUTANT																					i
METALS (mg/kg)																					
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)			5 (j)				97-100-1-100-1		NA NA	4.47 16.7	2.25 15.8	1.98 17.4	2.24 16.9	2.07 15.8	2.53 15.7	2.15 19.1	2.43 18,1
Chromium (6010) Copper (6010)	450 41,000	38	1 (h)(k). 100	340,000 (k) 390			<b>23.1</b> 19.1				English Maria		NA	16.7 17.9 J	15.8	1/19 12 J	16.9 16.5	15.8 13.9	13.2	19.1	18,1
Lead (7421)	800		50	4000		00	9	750	750	760		30	NA NA	7,32 J		1.85 U	4.71	2,13	2.27	1.92 U	1.89 U
Nickel (6010)	20,000	130	30	625			21.4	-					NA	16.8	17.6	18.6	19.3	17.9	17.9	20.4	18.7
Zinc (6010)	100,000	12,000	50 (h)	20,000	60 (n) 2	200	60:2						NA	67.6	49.8	46.8	208	49.1	52.1 J	52,6	46.9
												I									[
Cadmium (6010)	450	8	4	125 73		20		-					NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Mercury (7471)	310		0.3	/d	1.5 (	0.1					Section 19	a desar	NA NA	NA.	NA .	NA NA	NA.	NA	NA	NA	Maria NA
1		ı				ı	- 1			1	ı	I									ı

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## TABLE C-3a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: LOADING RACK/ENTRANCE AREA (0-3 FT) PHASE III RI

Page 3 of 3

0.05 (4.15) (4.15) (4.15) (4.15) (4.15) (4.15) SCREENING CRITERIA Risk-Based Concentrations COMP COMP COMP COMP Volatilization to Leaching to Soil Ingestion, Dermal Contact, and Inhalation Outdoor Air Groundwater .W7S (0-0.5) G1 (1-1.5) G4 (1-1.5) G5 (1-1.5) BA2 (1-1.5) BA3 (1-1.5) BA4 (1-1.5) BA5 (1-1.5) BA6 (1-1.5) Sample Identification Laboratory Identification: EPA Region 9 PRGs
Date Collected: Industrial DAF=20 Background Construction Excavation S037C 0108189-01 0108182-13 0108189-04 0108172-29 0108182-01 0108182-04 0108182-08 0108182-10 8/24/2001 BETX (mg/kg) EPA Method SW8021B 0.056 U NA NA 14 0.03 3300 340 9400 48 0.052 NA NA NA NA NA NA Benzene 0.056 ⊎ 0.056 U NA NA NA NA NA NA NA. 3300 (f) -- -- --NA -NA NA-13 74,000 28,000 NA Ethylbenzene\_\* 400 180 NA NA 520 12 200 1440 68.000 39.000 NA NA Toluene NA. NA NA NA: Xylenes, Total 420 24,000 19,000 420 (g) 0.056 U NA NA NA NA NA 24,000 (g) 19,000 (g) NA m,p-Xylene 210 (g) NA 19,900 (g) 24,000 (g) 100 (9) 0.056 U NA NA... NA: NA o-Xylene 420 (g) 210 (9) DIOXINS AND FURANS (ng/kg) NA NA NA NA NA NA NA Total TEQ NA

TABLE C-3b Page 1 of 3

#### TABLE C-3b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: LOADING RACK/ENTRANCE AREA (>3 FT) PHASE III RI

						CF	CF CF	CF CF	CELL	CF	CF	CF =	CF	CHA THE	er er	CF .	Winder 1
			SCREENING CRITERIA														
				ed Concentration		Ì			COMP	COMP	COMP	COMP		COMP			
Sample Identification:	EPA Region 9		Soil Ingestion, Dermal Contact, and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	LW7S (7.5-9.0)	LW79 (12 5-14 0)	LW7S (19.5-20.3)	G1 (10-13)	G4 (12.5-14)	G29 (CF) Dup of G4 (12.5-14)	G5 (10.5-13)	BA2 (14-15)	BA3 (14-16)	BA4 (13-14)	BA5 (14-15)	BA6 (10.5-11.5)
Laboratory Identification:	PRGs	Background	Excavation	Odidooi Aii	Groundwater	S037D	S037E	S037F	0108189-03	0108182-15	0108182-16	0108189-06	0108172-31	0108182-03	0108182-06	0108182-07	0108182-12
Date Collected:	DAF=20		Worker	Occupational	Occupational	03/17/97	03/17/97	03/17/97	8/24/2001	8/23/2001	8/23/2001	8/24/2001	8/22/2001	8/23/2001	8/23/2001	8/23/2001	8/23/2001
SEMIVOLATILES (mg/kg)		1															
EPA Method SW8270																	
2,6-Dinitrotoluene	0.0007			-		NA	0.86 U		0.330 ∪	0.330 (		0.330 U	0.330 U	0.330 U	0.330 U		
2-Methylnaphthalene	84 (b) 570					NA NA	9.8 0.17 U	NA NA	0.067 ∪	0.067 U		0.067 U 0.067 U	0.067-U 0.067 U		0.067 U 0.067 U		
Acenaphthene Acenaphthylene	84 (b)		-	-	-	NA NA	0.17 U		0.067 U 0.067 U			0.067 U		0.067 U			
Anthracene	12,000		-		-	NA.	0.17 U	NA NA	0.067 U	0.067 (		0.067 U	0.067 U	0.067 U	0.067 U		
Benzo(a)anthracene	2	1	590			· · · · · · · · · · · · · · · · · · ·	- 0.17 U	- NA	=0.067 U	0.067 t	J 0.067 U	0.120	0.067 U	0.067 U	0.067 U	0.067 ∪	
Benzo(a)pyrene	8		59			NA.	0.17 U	NA	0.067 U	0.067 L		0.170	0.067 U	0.067 U	0.067 U		0.067 U
Benzo(b)fluoranthene	5					NA.			0.067 U			0.220	0.067 U	9.067 U			
Benzo(g,h,i)perylene Benzo(k)fluoranthene	84 (b) 49	-	59007 - 417	-		NA NA	0.17 U 0.17 U	NA NA	0.067 U 0.067 U	0.067 U 0.067 U		0.160 0.078	0.067 U 0,067 U	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U
bis(2-Ethylhexyl)phthalate	3600 (c)	-				NA NA	0.17 U	NA NA	0.067 U	0.067 L		0.067 U	0.067 ⊔	0.067 U	0.067 U		0.200
Butylbenzylphthalate.	930					⊩NA		NA NA	0.067 Ü			0.067 ⊍	0.067 U	0.067 U	0.067 U		
Carbazole	0.6		-			NA.	0.17 U	NA	0.087 U	0.067 L		0.067 U	0.067 U	0.067 U	0.067 U		0.087 U
Chrysene Dibenz(a,h)anthracene	160		59,000			NA.	0.17 U 0.17 U	NA NA	0.067 U 0.067 U	0.067 U 0.067 U		<b>0.120</b> 0.067 ∪	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		
Dibenzia,njanthracene Dibenzofuran	2		59			NA NA	0.17 U 0.17 U	NA NA	0.067 U	0.067 L		0.067 U	0.067 U 0.067 U	0.067 U	0.067 U		
Diethylphthalate	3600 (c)	-	-			NA.	0.17 U	NA.	0.067 U	0.067 L		0.067 U	0.067 U	0,067 U	0.067 U		0.067 U
Dimethylphthalate	3600 (c)					NA.		NA.	- 0.067 U	0.067 L		0.067 U	0.067 U	0.067 U	0.067 U		
Di-n-Butylphthalate	2300		-			NA	0.17 U	NA	0.067 U	0.067 L		0.067 U	0.067 U	0.067 U	0.067 U		0.067 U
Di n Octyliphthalate Fluoranthene	10,000 4300					NA NA	0.17=U 0.17 U	NA NA	0.067 U 0.067 U	0.067 L 0.067 L		0.067 U 0.320	0.067 U 0.067 U		0.067 U 0.067 U		0.067 U 0.067 U
Huorene	4300 560					NA NA			0.067 U	0.067 (		0.320 0.067 U		0.067 U 0.067 U	0.067 U		0.067 U
Hexachloroethane	0.5	CONTRACTOR CONTRACTOR				NA NA	0.34 U	NA NA	0.130 U	0.130 L		0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U
Indeno(1,2,3-od)pyrene	14		590			NA.	0.17 U	NA NA	0.067 U	D.067 L		0.110	0.067 U	0.067-U	0.067 U		0.067 U
Naphthalene	84		20,000		15	NA	7.5	NA	0.067 U	0.067 L		0.067 U	0.130 U	0.130 U	0.130 U		0.130 U
Pentachlorophenol	0.03					.NA.			0 330 17.	0.330 l		0,830-U	0.830 U	0.330 U	0.330 U		
Phenanthrene Pyrene	84 (b) 4200		9 A F 2			NA NA	0.17 U 0.17 U	NA NA	0.067 U 0.067 U	0.067 L 0.067 L		0.270 0.430	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U
Pyrene	4200			Marian Marian		INA	Unit of the Unit o	194	0.007-0		/ U.U.O. U.U.	U.4au			ע עטייט	0.007.0	0.007 0
SEMIVOLATILES (mg/kg)																	
EPA Method SW8270SIM	l																
Acenaphthene	570			PARTON PARTON AND AND AND AND AND AND AND AND AND AN	LUTHAGEN SERVICES	0.0086		0.0086 U	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
Acenaph thylene	84 (b)		-			0.0086		0.0086 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA-	NA NA	NA -
Anthracene Benzo(a)anthracene	12,000 2		590			0.0086		0.0086 U 0.02 J	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	8		59	-		0.0086		0.018 J	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
Benzo(b)ficoranthene	5					0.0086		0.0086 U	NA.	NA.	NA.	NA.	NA	NA.	NA.	NA -	NA NA
Benza(g,h,i)perylene	84 (b)					0.0086 U		0.01 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Berizo(k)fluoranthene	49		5900			0.0086 1		0.01 J	NA .	NA.	NA.	≓ NA	NA	NA .		NA .	NA NA
Chrysene Dibenz(a,h)anthracene	160 2		59,000 <b>59</b>			0.0086 U		0.015 J 0.0086 U ii	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	4300					0.0086 (		0.031 J	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Fluorene	560		- 7, 8		4	0.0086		0.0086 U	NA NA	NA:	NA -	NA.	NA	NA NA	NA.	NA.	NA NA
Indeno(1,2,3-cd)pyrene	14		590			0.0086 \		0.011 J	NA NA	NA NA	NA	NA	NA	NA	NA NA	NA	NA
Naphthalene		e de maio d	20,000		15	0.0086 L		0.015 J	NA	NA.	NA	NA,			NA -	. NA	
Phenanthrene Pyrene	84 (b) 4200					0.0086 U 0.0086 U		0.024 J 0.034 J	NA NA	NA NA	NA NA	NA NA	NA NA	NA N <b>A</b>	NA NA	NA NA	NA NA
LAITHR	4200		E-95-E-95-			0.0086	INA:	U:U34 J	NA.	NA :	TVAC	PART NA	S SECTION DATE:	NA	JNA.	ING.	NA -
CHLORINATED PHENOLS (mg/kg	)			į	ı												
Method 8040/8270SIM	.	1															
Pentachlorophenol	0.03					0.0081	0.022	0.0081 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
J	1	ļ			i												

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TABLE C-3b
Page 2 of 3

### TABLE C-3b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: LOADING RACK/ENTRANCE AREA (>3 FT) PHASE III RI

						CF.	CF	EL TORELLE	CF.	CF.	CF	<b>CF</b>	CF:	CF	CF CF	CF	PRINCE IN COMMENT
		,	SCREENING CRITERIA														
				d Concentrations					COMP	COMP	COMP	COMP		COMP			
Sample Identification:	EPA Region 9	İ	Soil Ingestion, Dermal Contact, and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	LW7S (7.5-9.0)	LW7S (12.5-14.0)	(c.nc.a.ph) 97WI	G1 (10-13)	G4 (12.5-14)	G29 (CF) Dup of G4 (12.5-14)	G5 (10.5-13)	BA2 (14-15)	BA3 (14-16)	BA4 (13-14)	BA5 (14-15)	BA6 (10.5-11.5)
Laboratory Identification:	PRGs	Background	Excavation	Cuidoo Aii	Circuitottatei	S037D	S037E	S037F	0108189-03	0108182-15	0108182-16	0108189-06	0108172-31	0108182-03	0108182-06	0108182-07	0108182-12
Date Collected:			Worker	Occupational	Occupational	03/17/97	03/17/97	03/17/97	8/24/2001	8/23/2001	8/23/2001	8/24/2001	8/22/2001	8/23/2001	8/23/2001	8/23/2001	8/23/2001
VOLATILES (mg/kg)	ı	1			1												
EPA Method SW8260																	
1,2,4-Trimethylbenzene			40,000	790	55	NA	NA	NA	0.002 U	0.028 J		0.001 U		48.500 J	0.001 U		
1,2-Dibromoethane	199		ZJ:	1.7	0.000059	NA-	NA	NA	0.001 U	0.001 t		0.001 U					
1,3,5-Trimethylbenzene			40,000		12	NA NA	NA	NA NA	0.002 U 0.005 U	0.0085 J 0.005 L		0.001 U		3.970 J	0.001 U		
2-Bulanone 4-Isopropyltoluene	12 (a)			MAN (1987)	10 M	NA NA	1:5 U NA	NA NA	0.009 U	0.001 L		0.005 U 0.001 U		0.050 U 1.180	0.005 U 0.001 U		
Acetone	16					NA NA	1.5 U	NA.	C 005. U			0.005 U		0.0799	0.005 U		
Benzene	0.03		9400	48	0.052	NA	0.31 U	NA	0.001 U	0.001 U		0.001 U			0.001 U		0.001 U
Carbon Disulfide	32					NA.	0.31 U	NA -	0.001 U	0 001 L		0.001 U		. 0.010 U			
Ethylbenzene	13		**	Pa .		NA	3	NA	0.001 U	0.00337 J	0.001 UJ	0.001 U	0.00193	0.010 U	0.001 U		0.001 U
Isopropylbenzene						, NA	NA NA	NA NA	.0.001 U	0.00149	0.001 U	0.001 U	0.0328	4.140	0.001 U		
m,p-Xylene Methyl lodide	210 (g)					NA NA	2.5 NA	NA NA	0.002 U 0.001 U	0.015 J 0.001 L	0.00536 J 0.001 Li	0.002 U 0.001 U	0.00522 0.001-U	0.0657 J 0.010 U	0.002 U 0.001 U	0.002 U 0.001 U	0.002 U 0.001 U
Methyl tert-butyl ether	4-2-40	-		720	0.30	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA NA
Naphthalene	84		20.000	720	15	NA NA	NA NA	NA NA	0.020 U	0.0165	0.0228 J	0.010 U			0.010 U	0.010 U	
n-Butylbenzene				••		NA	NA	NA	0.004 U	0.0062 J	0.0516 J	0.002 U	0.0738	4.460 J	0.002 U	0.002 U	0.002 U
n-Propylbenzene						NA NA	NA NA	NA NA	0.002 U	0.0041		0.001 U		9.510	0.001 U		
o-Xylene	210 (g)				100 (g)	NA	0.31 U	NA	0.001 U	0.00579 J	0.001 UJ	0.001 U	0.001 U	0.010 U	0.001 U	0.001 U	0.001 U
sec-Butylbenzene						NA.	NA	NA NA	0.002 U	0.00495 J		0.001 U	0.0488		0 001 U		
tert-Butylbenzene	 12		-	-	180	NA NA	NA 0.31 U	NA NA	0.002 U 0.001 U	0.001 L 0.001 L		0.001 U 0.001 U	0.00269 0.00182	0.010 U 0.0377	0.001 U	0.001 U 0.001 U	0.001 U 0.001 U
Toluene	12				180	INA.	USI U	INA	- 0.001 U	0.001 t	0.00289	, UWI U	0,00162	U.Uarr	0.001 0	0.001.0	0.0010
HYDROCARBONS (mg/kg)																	
NWTPH-HCID Gasoline				80.000	110	NA	NA	NA	24.4 U	24.1 U	23.8 U	24.4 U	Gasoline	Gasoline	24.1 U	24.1 U	23.0 U
Kerosene				80,000	110	NA NA	NA NA	NA NA	610 U		Kerosene.	61.0 U			60.2 U		
Diesel						NA	NA	NA	61.0 U	60.2 U		61.0 U	60.2 U	59.5 U	60.2 U	60.2 U	57.5 U
Lube Oil						NA	NA	NA NA	Lube Oil	120 U	119 U	122 U	120.U	119 U	120 U	120 U	115 U
NWTPH-Dx (mg/kg)																	
TPH-Diesel Range			_			6.4 L	480	6.5 U	44.7	267	280	NA	NA	NA	NA	NA	NA I
TPH-Kerosene Range						NA NA	NA	NA NA	NA -	408	415	- NA	NA L	NA.	NA	NA NA	NA NA
TPH-Motor Oil Range			-			NA	NA	NA	208	60.2 U	59.5 U	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)																	1
TPH-Gasoline Range				80.000	110	5.0 L	J NA	5.0 U	NA	NA	NA	NA	107	1360	NA	NA	NA
The same of the sa		-															
PRIORITY POLLUTANT	-																
METALS (mg/kg)																	
Arsenic (7060)	29	5 (j)				NA	NA	NA	3.30	1.82	1.85	2.04	2,41	1.86	2.01 14.1	2.19	2.12
Chromium (6010)	38	23.1 19.1		-		NA NA	NA NA	NA NA	16.8 13.5 J	14.3 11.5	14.2 11.8	16.5 14.3 J	15.2 12.0	14.9 11.8	14.1	13.2 10.7	15.6
Copper (6010) Lead (7421)	-	19.1	750	-	30	NA NA	NA NA	NA NA	1.88 J	2.65		1,82 J	2.43	2,59	2.00 U	10.7 1.85 U	
Nickel (6010)	130	21.4				NA NA	NA	NA NA	18.2	15.8	16.9	18	16.7	17.1	15.7	15.2	18.5
Zinc (6010)	12,000	60.2				NA.	NA NA	NA.	47.1	46.7		46.6	1290	43.7	44.9	41	49
- Indian photo seems when we consider the seems of the se																	
Cadmium (6010)	8			-		NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)						NA :	MARKET NAME OF	NA →	- NA	= NA-	NA NA	NA.	NA NA	NA.	NA.	NA.	NA
	I	I	Į	I	1												I

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## TABLE C-3b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: LOADING RACK/ENTRANCE AREA (>3 FT) PHASE III RI

Page 3 of 3

						CF	CF CF	CE	CF.	SE SE	CF CF	or er	CF	CF	CF.	CF.	CF CF
-			SCREENING CRITERIA														
•			Risk-Base	d Concentrations	3				COMP	COMP	COMP	COMP		COMP			
			Soil Ingestion, Dermal	Volatilization to	Leaching to						G29 (CF)						
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	LW7S (7.5-9.0)	LW7S (12.5-14.0)	LW7S (19.5-20.3)	G1 (10-13)	G4 (12.5-14)	Dup of G4 (12.5-14)	G5 (10.5-13)	BA2 (14-15)	BA3 (14-16)	BA4 (13-14)	BA5 (14-15)	BA6 (10.5-11.5)
Laboratory Identification:	PRGs	Background	Excavation			S037D	S037E	S037F	0108189-03	0108182-15	0108182-16	0108189-06	0108172-31	0108182-03	0108182-06	0108182-07	0108182-12
Date Collected:	DAF=20		Worker	Occupational	Occupational	03/17/97	03/17/97	03/17/97	8/24/2001	8/23/2001	8/23/2001	8/24/2001	8/22/2001	8/23/2001	8/23/2001	8/23/2001	B/23/2001
BETX (mg/kg)																	
EPA Method SW8021B																	
Benzene	0.03		9400	48	0.052	0.064 U	NA.	0.066 U	NA	NA	NA	NA	NA.	NA	NA	NA.	NA
Ethylbenzene	13				4.0	0.064 N	NA:	0.066 U	= NA =	- NA	NA	:NA	NA	NA NA	NA NA	. NA	NA NA
Toluene	12				180	0.064 U	NA	0.066 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	210				100	NA.	NA NA	NA .	NA .	NA.	NA.	NA NA	ŇΑ	NA NA	NA NA	NA :	NA NA
m,p-Xylene	210 (g)		-			0.064 U	NA	0.066 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	210 (g)				100 (g)	0.064 U	NA	0.066 ⊔	NA NA	. NA	NA -	NA *	NA	= NA -	NA	NA .	NA
DIOXINS AND FURANS (ng/kg)	i																
Total TEQ			-	- :		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 1 of 21

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

												0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0.0,5
						SCREENING C	RITERIA											
								Risk-	Based Conce	ntrations								
										Volatilization to								
Sample Identification: Laboratory Identification:	EPA Region	0.0000		Oregon SI	We.	Background	Soil Ingestion, E	Dermal Contact, Construction	and Inhalation Excavation	Outdoor Air	Groundwater	RA14-02 (0.5-0.75) 0107115-02	RA14-03 (0-0.5) 0108077-01	RA15-02 (0-0.5) 0107115-07	RA15-02 (0.5-0.75) 0107115-08	FIA16-01 (0.5-0.75) 0108145-01	RA16-06 (0-0.5) 0107115-11	RA16-07 (0-0.5) 0108229-03
Date Collected:		DAF=20	Plants		Birds Inverts	Background	Occupational	Worker	Worker	Occupational	Occupational	7/16/2001	8/7/2001	7/16/2001	7/16/2001	7/16/2001	8/17/2001	8/30/2001
SEMIVOLATILES (mg/kg)														- 442				
EPA Method SW8270 2.6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)			_					NA.	NA	NA	NA	NA	NA	NA
2-Methylnaohthalene		84 (b)	10 (b)									NA.		NA NA	NA NA	NA .	NA NA	NA NA
Acenaphthene	29000	570	20		-		41,000	16,000	-			NA	NA	NA	NA	NA	NA	NA NA
Acenaphthylene		84 (b)	10 (b)	3900 (b)	18		ar History	-			5 G+3 A		NA.	NA NA	NA .	. NA	NA	NA NA
Anthracene Benzora)anthracene		12,000					27	90,000	 590			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	21 0.21	<b>2</b> 8		125		-	0.27	2.1	590			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	2.1	5	100		e	PRODUCTION						NA NA	NA .	NA.		NA.	NA NA	NA.
Benzo(g,h,i)perylene		84 (b)	10 (b)	3900 (b)								NA NA	NA NA	NA	NA	NA NA	NA	NA
Benzo(k)fluoranthene	21	49					27	210	5900		A ** **	, NA	NA .	NA.	NA	NA.	NA .	
bis(2-Ethylhexyl)phthalate Butylbenzylphthalate	120 100.000	3600 (c) 930		1020 1020 (d)	4.5 1.5 (d) =	-						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Carbazole	86	0.6		1020 (0)	+.5 (0)							NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	210	160		far law and			270	2100	59,000	The state of the s		NA NA		NA.	NA NA	NA.	NA.	NA.
Dibenz(a,h)anthracene	0.21	2				-	0.27	2.1	59			NA	NA	NA NA	NA	NA	NA	NA
Diperizofuran	1600		-									NA.			NA	NA NA	NA.	NA
Diethylphthalate Dimethylphthalate		3600 (c) 3600 (c)			.45 (e)	-					-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Di-n-Butylphthalate		2300 (c)	200 (e) 200		0.45							NA NA	AN	NA	NA NA	NA NA	NA NA	NA
Di-n-Octyl phthalate		10,000			.45 (e)							NA NA		NA.	NA NA	NA.	NA NA	NA.
Fluoranthene	22,000	4300					29,000	8900				NA	NA	NA NA	NA	NA	NA	NA
Fluorene		560	Funktion.		30	SLAS	35,000	12,000				NA.		NA	NA NA	NA.	NA	NA.
Hexachloroethane Indeno(1,2/3-cd)pyrene	120 <b>2.1</b>	0.5 14					27	21	 590	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	190	84	10	3900			770	710	20.000		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pentachlorophenol		0.03		30	4							NA NA	NA NA	NA NA	NA.	NA NA		NA
Phenanthrene		84 (b)						er and their state states			-	NA	NA	NA	NA	NA	NA	NA
Fyrene	29,000	4200					21,000	.6700				NA.	NA.	NA	NA NA	NA NA	NA	NA.
SEMIVOLATILES (mg/kg)		İ									İ							
EPA Method SW8270SIM	00.000	570					44.000	40.000				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00667 U	0.0075
Acenaphthene Acenaphthylene	29,000 190 (b):	84 (b)	20 10 (b)	3900 (b)			41,000	16,000				0.0289	0.01 0	0.0307	0.01 U	0.0212	0.00719	0.0075
Anthracene		12,000						90,000	-		-	0.0345	0.0216	0.024	0.01 U	0.0171	0.00667 U	0.0162
Benzo(a)anthracene	21	2				- (8-4 P) (2	2.7	21	590			0.161	0.0235	0.163	0.01 U		0.0361	0.145
Benzo(a)pyrene	0.21	8		125		(854.1024).	0.27	2.1	59			0.394	0.0466	0.428	0.01	0.281	0.0685	0.335
Benzo(b)fluoranthene Benzo(g,h,i)perylene		5 84 (b)	10 (b)	3900 (b)	Austi							0.444 0.425	0.0508 0.0613	0,464 0.432	0.0134 0.0121	0.299 0.295	0.0966 0.0774	0.355 0.365
Benzo(k)fluoranthene		84 (D) 49	10 (0)	3900 (0)			27	210	5900			0.425	0.0171	0.432	0.0121 0.01 U	0.0914	0.0354	0.118
Chrysene	210	160				-	270	2100	59,000			0.231	0.027	0.276	0.0107	0.161	0.0531	0.211
Dibenz(a,hiarithracene	0,21	2					0.27	21 1	59			0.0348	0.01 U		0.01-U	0,0245	0,0137	0.0521
Fluoranthene		4300					29,000	8900				0.516	0.0884	0.517	0.0127	0.335	0.103	0.411
Fluorene Indeno(1,2,3-cd)pyrene	26,000 2,1	560 14			. 30		35,000 2.7	12.000 21	590			0.01 U 0.296	0.0385	0.01 U 0.31	0:01 U 0:01 U	0.01-U 0.203	0.00667 U 0.0532	0.00667 U 0.246
Naphthalene	2.1 190	81		3900			2./ 770	21 710	20.000		15	0.296 0.01 U			0.01 0	0.203 0.01 U	0.0067-U	0.00685
Phenanthrene		84 (b)			SAMPLE CHEMINATE				*	-		0.151	0.0428	0.117	0.01 U	0.067	0.0217	0.111
Pyrene	29,000	4200					21,000	6700				0.788	0.123	0.822	0.0208	0.537	0.14	0.639 J
CHLORINATED PHENOLS (mg/kg	)																	
Method 8040/8270SIM Pentachlorophenol	9.0	0.03	3	30	4	_			_	_	_ 1	NA	NA	NA	NA	NA	NA	NA
r entachlorophenor	3.0	0.03	S	30	- 4	_	-		-		-	INM	INM	INA	110	DIO.	1375	(ND

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Page 2 of 21

# BZTO104(e)023442

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

													0-0.5	0-0.5	0-0,5	0-0,5	0-0,5	0-0.5	0-0.5
							SCREENING C	RITERIA			****			** **					
									Risk-	Based Concer			1						
											Volatilization to	Leaching to							
Sample Identification: Laboratory Identification:	EDA Basi	ion 9 PRGs	İ	Oregon	CLVA	i	Background	Soil Ingestion, D	Construction	Excavation	Outdoor Air	Groundwater	RA14-02 (0.5-0.75) 0107115-02	BA14-03 (0-0.5) 0108077-01	HA15-02 (0-0.5) 0107115-07	RA15-02 (0.5-0.75) 0107115-08	RA16-01 (0.5-0.75) 0108145-01	RA16-06 (0-0.5) 0107115-11	RA16-07 (0-0.5) 0108229-03
Date Collected:	Industrial	DAF=20	Plante	Mammais		nverts	background	Occupational	Worker	Worker	Occupational	Occupational	7/16/2001	8/7/2001	7/16/2001	7/16/2001	7/16/2001	8/17/2001	8/30/2001
	IIIddətildi	DAI - ZU	Tianta	TVIERITATIES.	Dirdo i	17010		Оссаралона	WOIRCI	**OIRCI	Оосоранона	Geografional	771002001	G172001	7710/2001	3310/2001	7710/2001	0/1//2001	0/00/2001
VOLATILES (mg/kg) EPA Method SW8260			1			- 1							l						
1,2,4-Trimethylbenzene	170		ĺ	3300 (f)		- 1		1500	1400	40,000	790	55	NA.	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane								0.033	0.25	7.1	17	0.000059	NA.	NA-	NA	NA -	NA NA	- NA	NA NA
1,3,5-Trimethylbenzene	70		200-000-0	3300 (f)	*-			1500	1400	40,000		12	NA	NA	NA.	NA	NA	NA	NA
2-Butanone	110,000	16 <b>-</b> 811					10, 100				in wall		NA.	NA	NA:	NA.	NA.	NA.	NA .
4-isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)			**						NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA
Acetorie	54,000	16		1250								F-10-10-10-10-10-10-10-10-10-10-10-10-10-	NA NA	→ NA		NA NA	NA	-NA	NA
Benzene	1.4	0.03	CHOMA SAME	3300				34	340	9400	48	0.052	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	720	32 13		2202.40				74,000	20,000		37		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Ethylbenzene Isopropylbenzene	400 <b>2000</b>	13		3300 (f) 3300 (f)		and the second	 	74,000 51,000	28,000 24,000				NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA
m,p-Xylene	420 (g)	210 (g)	-	- abou (i)		CF-ISSE		24,000 (g)	19,000 (g)		and the same of		NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA
Methyl lodide	420 (9)					1407		24,000 (9)					NA NA	NA:	AA .	NA NA	NA NA	NA NA	NA NA
Methyl tert-butyl ether	70							760	9000		720	0.30	NA	NA	NA	NA	NA	NA -	NA
Naphthalene	190	84 -	10	3900			-	770	710	20,000		15	NA NA	NA NA	NA NA	NA -	NA NA	NA.	NA NA
n-Butylbenzene	240			3300 (f)	na a constitue de la constitue	Telepo di Maria							NA	NA	NA	NA	NA	NA NA	NA
n-Propylbenzene	240						34.	19,000	9300		**	***	NA NA	NA :	NA.	NA	NA.	NA .	NA SE
o-Xylene	420 (g)	210 (g)	1			A CONTRACTOR		24,000 (g)	19,000 (g)			100 (g)	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
sec:Butylbenzene tert-Butylbenzene	220 390			3300 (f)									NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	520	12	200	1440				68.000	39 000			180	N/A	NA NA	NA NA	- NA	NA NA	NA	NA
, and the second			-					CHECK AND DESCRIPTION		DESCRIPTION FOR SAME	S. W. P. Car Tolombrook			-532					CONTRACTOR SERVICE STOP IN
HYDROCARBONS (mg/kg)			ł									1							
NWTPH-HCID																			
Gasoline					_		[	22.000	13.000		80.000	110	NA	NA	NA	NA	NA	NA	NA
Kerosene													NA .	NA NA	NA.		NA NA	NA.	NA NA
Diesel						-	- 1	70,000	23,000				NA	NA	NA	NA	NA	NA	NA
Loba Oil													NA.	NA	NA NA	NA NA	NA NA	NA	NA NA
NWTPH-Dx (mg/kg)						İ													
TPH-Diesel Range						_		70,000	23,000		**		NA	NA	NA	NA	NA	NA	NA
TPH-Kerosene Bange									Carlo kalls water				NA.	- NA	NA.	NA-	NA NA	NA-	NA NA
TPH-Motor Oil Range			-	••					***				NA	NA	NA	NA	NA	NA	NA
NWTPH-G (ma/kg)										i									
TPH-Gasoline Range				_				22,000	13.000		80.000	110	NA	NA	NA	NA	NA	NA	NA
						- 1	ĺ		,										
PRIORITY POLLUTANT																			
METALS (mg/kg)										i									
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)		iO (i)	5 (j)	CONTRACTOR ALERGA	** ***********************************	EAST TELEVISION OF THE SECOND			NA	NA NA	N.A	NA	NA	NA NA	NA
Chromium (6010)	450 .	38	1 (h)(k)		4 (h)(k) 0.4			100 <del>2</del> 00 100	DOMESTICA O	No. 20 Her See			. NA	NA :	NA :	NA NA	NA	- NA	NA NA
Copper (6010) Lead (7421)	41,000 800		100	390 4000		50 500	19.1	7.50	Land Company	780		30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
LB40 (7421) Nickel (6010)	20,000	130	50 30	4000 625		200	21.4	10U	200/90				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Zinc (6010)	100,000	12,000	. 50 (h)	20,000		200	60.2						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
			MAL DE				- Company (Sept.	THE RESIDENCE OF THE PARTY OF T	ercen, remaj promajan Pro	# TRUMP COLOR OF THE PROPERTY.	No. of Control of Control								
Cadmium (6010)	450	8	4	125	6	20							NA	NA	NA	NA	NA	NA	NA
Mercury (7471)	310		0.3	73	1.5	0.1						總學學工	NA .	NA	NA NA	NA	NA	NA	NA.
I										1	ı	1							

7/19/05 \Ledmdata\wprock231\009\132\Phill RI 07/19\05\Phill RI Rpt\_App C EP 0-3

TABLE C-4a
Page 3 of 21
RY OF DETECTED ANALYTICAL RESULTS IN SOIL:

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

													0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
							SCREENING C	RITERIA											
									Risk-	Based Concen	trations								
											Volatilization to								
Sample Identification:								Soil Ingestion, I	Dermal Contact,		Outdoor Air	Groundwater		RA14-03 (0-0.5)	RA15-02 (0-0.5)			RA16-06 (0-0.5)	RA16-07 (0-0.5)
Laboratory Identification:	EPA Region			Oregon			Background		Construction	Excavation			0107115-02	0108077-01	0107115-07	0107115-08	0108145-01	0107115-11	0108229-03
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	inverts		Occupational	Worker	Worker	Occupational	Occupational	7/16/2001	8/7/2001	7/16/2001	7/16/2001	7/16/2001	8/17/2001	8/30/2001
BETX (mg/kg) EPA Method SW8021B																			
Benzene	1.4	0.03	١	3300				34	340	9400	48	0.052	NA.	NA	NA	NA	NA	NA	NA
Ethylbenzene 1	400	13		3300 (f)		91 A		74,000	28,000				NA.	NA I	NA.	NA T	NA.	NA.	NA
Toluene	520	12	200	1440	22 - 662 - 662 A	### ### - 01-0		68,000	39,000			180	NA NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	420	210						24.000	19,000			100	NA NA	NA.	NA	NA -	NA NA	NA NA	NA .
m,p-Xylene	420 (g)	210 (g)			**			24,000 (g)	19,000 (g)		**		NA	NA	NA	NA	NA	NA	NA
o-Xylene	420 (g)	210 (g)	1		<b>FE</b>			= 24,000 (g)	19,000 (g)			100 (g)	NA NA	NA.	NA.	NA.	NA -	NA.	NA.
DIOXINS AND FURANS (ng/kg) Total TEQ			~	-	**			-			**		NA	NA	NA	NA	NA	NA	NA

Page 4 of 21

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

												0-0.5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
						SCREENING (	RITERIA												
	1						<del> </del>	Risk-	Based Conce	ntrations Volatifization to	Leaching to	COMP	COMP	COMP	COMP	COMP	COMP G31 (0-0.5)	COMP	COMP
Sample Identification						l	Soil Ingestion	, Dermal Contact			Groundwater	G6 (0-0.5)	G7 (0-0.5)	G10 (0-0.5)	G11 (0-0.5)	G15 (0-0.5)	Dup of G15 (0-0.5)	G17 (0-0.5)	G18 (0-0.5)
Laboratory Identification Date Collected			Plants	Oregon SI Mammals	LVs Birds Inverts	Background	Occupationa	Construction  Worker	Excavation Worker	Occupational	Occupational	0108189-12 8/24/2001	0108196-01 8/27/2001	0108189-17 8/24/2001	0108196-04 8/27/2001	0108172-44 8/22/2001	0108172-40 8/22/2001	0108172-15 8/21/2001	0108172-36 8/22/2001
SEMIVOLATILES (mg/kg)		Ì														•			
EPA Method SW8270																			
2,6-Dinitrotoluene 2 Methylnaphthalene		0.0007 84 (b)	200 (a) 10 (b)	1440 (a) 3900 (b)		-			 			0.330 U 0.067 U=	0.330 U 0.074	0.330 U 0.067 U	0.330 U 0.067 U			0.330 U 0.067 U	0.330 U 0.087 U
Acenaphthene	29000	570	20				41,000	16,000	-		-	0.067 U	<b>0.530</b> J	0.067 U	0.067 U	0.096	0.067 U	0.067 U	0.067 U
Acenaphthylene Anthracene		84 (b) 12,000	10 (b)	6900 (b)				90,000	-			0.067 U 0.067 U	2.900 4.300	0.095 0.092	0.067 U 0.067 U	<b>0,470</b> 0.780 J	0.360 0.440 J	1.300 1.300 J	0.067 U 0.067 U
Benzo(a)anthracene		2	(Table 1)				27	21	590			0.067 U	23.000	0.520	0.170	3.100 J	2,000 J	7.000 J	0.180 J
Benzo(a)pyrene Benzo(b)fuoranthene	0.21 2.1	8 5		125		to the man personal term	0.27	2.1	59			0.076 0.130	30.000 J 55.000	0.920	0.330 J 0.600	4.700 8.000 J	3.300 6.200 J	12.000 21.000 J	0.350
Benzo(g,h,i)perylene		84 (b)	10 (b)	3900 (b)					-		ann ammerina than	0.088	20.000 J	1.000	0.280 J	3.600	2,900	13.000	0.380
Benzo(k)fluoranthene		49					- 27	210	5900			0.067 U	19.000	0.550	0,210	0.067 U		6,600	0.180
bis(2-Ethylhexyl)phthalate Butylbenzylphthalate		600 (c) 930			4.5 l.5 (d)							0.067 U 0.067 U	0.330 U 0.330 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.067 U		0.067 U 0.067 U	0.067 U 0.067 U
Carbazole	86	0.6		••								0.067 U	1.300 J	0.067 U	0.067 U	0.250	0.130	0.330	0.067 U
Chrysene Dibenz(a,h)anthracene	0.21	<b>160</b>					270 0.27	2100 2.1	59,000 59			0.067 U 0.067 U	25.000 J 0.840 J	0.790 0.067 U	0,220 J 0,067 U	3,800 J 0.170	2.200 J 0.130	8.000 J 0.400	0.210 J 0.067 U
Dibenzofuran		i de la la		0.002 =								0.067 U	0.100 J	0.067 U	0 067 U			0.467 U	0.067-U
Diethylphthalate		600 (c)			.45 (e)	e ser bar transcriber						0.067 U 0.067 U	0.067 U	0.067 U	0.067 U	0.067 U		0.067 U 0.067 U	0.067 U
Dimethylphthalate Di-n-Butylphthalate		300 (c) 2300	200 (e) 200		.45 (e) 0.45	-	-			-		0.067 U	0.067 U 0.067 U	0.067 U 0.067 U	0.067 U 0.110	0.067 U 0.067 U		0.067 U	0.087 U 0.067 U
Di-n-Octyl phthalate		0,000	200 (e)	30,000 (c) 0	.45 (e)							0.067 U	0,330 U		0.067 U			0.067 U	0.067 U
Fluoranthene Fluorene		<b>4300</b> 560			- 30		29,000 35,000	8900 12:000				0.084 0.067 U	55.000 J 1.100 J	2.000 0.067 U	0.490 J 0.067 U	11.000 J 0.260 J	7.000 J 0.100 J	18.000 J 0.230	0.270 J 0.067 J
Hexachloroethane	120	0.5						-	-		-	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U	0.130 U
Indeno(1;2,3-cd)pyrene		14 84	10	3900			2.7. 770	21 710	590 20,000		15	0.067 U 0.067 U	16.000	0.730 0.067 U	<b>0.210</b> 0.067 U	2.700 0.067 U	2.200 0.067 U	8.700 0.067 U	0,270 0.067 U
Naphthalene Pentachlorophenol		0.03		30			770	710	20,000		10	0.067 U	0.140 0.330 U	0.330-U	0.007 U	0.007 U		0.030 U	0.007 U
Phenanthrene		34 (b)				-		-	-	-	-	0.067 U 0.100	36.000	1.100	0.160	7.800 J	3.800 J	8.500 J	0.078 J
Pyrene	29,000	4200					21,000	6700			District day of the	0.100	l, 000:08	2.200	0.510 √	11 000 J	7.700 J	20.000 J	0.380 J
SEMIVOLATILES (mg/kg)							l												
EPA Method SW8270SIM Acenaphthene	29,000	570	20				41,000	16,000				NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	= 190 (b) 8	(4 (b)		3900 (b)	A	WENTER OF				- Telegrap (1)		NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA.	NA.
Anthracene Benzo(a)anthracene		2,000 2	Station and		Fara es		2.7	90,000 21	 590			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene		8		125	An Martin Africa	-	0.27	2.1	59			NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(b) fluoranthene		5 34 (b)	10 (b)	3900 (b)								NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene Benzo(k)fluoranthene		49	10 (8)	3900 (D)			27	210	5900			NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA
Chrysene		160					270	2100	59,000		market white of the second	NA	NA	NA	NA	NA	NA	NA NA	NA
Dibenz(a.h)anthracene Fluoranthene		2 1300					0.27 29,000	2.1 8900	59			NA NA	NA NA	NA. NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene		560			30		35,000	12,000				NA NA	NA.				NA NA	NA NA	
Indeno(1,2,3-cd)pyrene Naphthalene		14 84	10	3900			2.7	21 - 710	590 20,000		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene		4 (b)		3800		-	-		- 20,7700	·	-	NA	NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA
Pyrene	29,000 4	1200					21,000	6700				NA	NA	NA NA	. NA	, NA	NA	NA NA	NA
CHLORINATED PHENOLS (mg/kg	) 3)																		
Method 8040/8270SIM	ľ																		
Pentachlorophenol	9.0	0.03	3	30	4		**	**		-		NA	NA	NA	NA	NA	NA	NA	NA
	1								,	,									

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TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

Page 5 of 21

	SCREENING CRITERIA												0-0.5	0-0.5	0-0.5	0:0:5	0-0.5	0-0.5	0-0.5	0-0.5
1					-		SCREENING C	RITERIA								···				
									Risk-E	Based Concer			COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP
Sample Identification:			i					Cait Imma-ti I		and Introduction	Volatilization to	Leaching to	00 (0 0 0)	07 (0 0 5)	040 (0.0.5)	044 (0.00)		G31 (0-0.5)		
Laboratory Identification:	FPA Begi	on 9 PRGs		Oregon	SI Ve		Background	Soil Ingestion, I	Construction	Excavation	Outdoor Air	Groundwater	G6 (0-0.5) 0108189-12	G7 (0-0.5) 0108196-01	G10 (0-0.5) 0108189-17	G11 (0-0.5) 0108196-04	G15 (0-0.5) 0108172-44	Dup of G15 (0-0.5) 0108172-40	G17 (0-0.5) 0108172-15	G18 (0-0.5) 0108172-36
Date Collected:	Industrial	DAF=20	Plants	Mammais		Inverts	Dackground	Occupational	Worker	Worker	Occupational	Occupational	8/24/2001	8/27/2001	8/24/2001	8/27/2001	8/22/2001	8/22/2001	8/21/2001	8/22/2001
VOLATILES (mg/kg)																				
EPA Method SW8260																				
1,2,4-Trimethylbenzene	170			3300 (f)				1500	1400	40,000	790	55	0.001 U	0.002 U	0.001 U	0.002 U	0.001 U	0.001 U	0.00192	0.001 U
1,2-Dibromoethane	0.073				- Maria			0.033	0.25	71	17	0.000059	- 0.001 U	0.001 U	0.001 U	0.002 U	0.001.0	0.001 U	0.001 U	0.001 U
1,3,5-Trimethylbenzene	70		-	3300 (f)			Mary transport at the contract of	1500	1400	40,000	The relative colors are recovered	12	0.001 U	0.002 U	0.001 U	0.002 U	0.001 U		0.001 U	0.001 U
2-Butanone	110,000		200 ( )						4-18-0				0:005 U	= 0 005 U		0 005 U			0,005 U	0.005 U
4-isopropyltoluene Acetone	520 (a) 54,000	12 (a)	200 (a)	1440 (a) 1250			76.866/1 http://doi.org/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10.100/10			64-8-V			0.001 U = 0.005 Û	0.002 U 0.005 U	0.001 U 0.005 U	0.002 U 0.005 U	0.001 U 0.005 U	0.001 U 0.00868	0.001 U 0.005 U	0.001 U
Benzene	1.4	0.03	-	3300	-			34	340	9400	48	0.052	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.005 U 0.001 U
Carbon Disulfide	720	32											0.001 U	0.001 U	0.001 U		0.001 U		0,001 U	0.001 U
Ethylbenzene	400	13		3300 (f)				74,000	28,000		-		0.001 U	0.001 U	0.001 U	0.002 U	0.001 U		0.001 ∪	0.001 U
Isopropylbenzene	2000			3300 (f)			****	51,000	24,000				= 0.001 U	0:001.TU	0.001-0	0.002 U	0.001. U		0.001 U	0.001 U
m.p-Xylene	420 (g)	210 (g)	 	SERVERACIONES				24,000 (g)	19,000 (g)				0.002 U	0.002 U	0.002 U	0.004 U	0.002 U	0.002 U	0.00271	0.002 U
Methyl lodide	70					2,		700	4000		700	0.20	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Methyl tert-butyl ether Naphthalene	190	84	10	3900				760 770	9000 710	20,000	720	0.30 15	NA 0.010-U	NA 0.020 U	NA 0.010 U	NA 0.020 U	NA 0.010 U	NA - 0.010 U-	NA 0.010 U	NA 0.010 U
n-Butylbenzene	240		aten aten a	3300 (f)				-					0.002 U	0.004 U	0.002 U	0.004 U	0.002 U	0.002 U	0.002 U	0.002 U
n Propylbenzene	240		胃薬 多	9300 (f)	19-1-6		-016	19.000	9300				0.001 U	0.002 U	0.001 U	0.002 U	0.001 U		0.001-U	
o-Xylene	420 (g)	210 (g)	1					24,000 (g)	19,000 (g)			100 (g)	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
sec-Butylbenzerie	220		10.00						it in second				0.001 U	0.002 U	0.001 U	0 CO2 U	0.001 U		-0.001 U	0.001 U
tert-Butylbenzene	390			3300 (f)		Significance in the						POTENCIA DINA CHIA	0.001 U	0.002 U	0.001 U	0.002 U	0.001 U		0.001 U	0.001 U
Touene	520	12	200	1440	* * * * * * * * * * * * * * * * * * * *	- 100		68,000	39,000			180	0.001 U	- 0.001 U	0.001 U	0.002 U	0.001 U	0.091 U	0.001,U	0.001 U
HYDROCARBONS (mg/kg)																				
` = ="			ļ																	
NWTPH-HCID Gasoline								22.000	13,000		80.000	440	D4 E II	04 7 11	04 7 11		00.5	00.011		
Kerosene								22,000	13,000		80,000	110	21.5 U 53.8 U	21.7 U \$4.3 U	21.7 U 54.3 U	22.7 U 56,8 U	22.5 U 56.2 U	22.2 U 55.6 U.;	21.5 U 53.8 U	22.7 U 56,8 U
Diesel								70,000	23.000	enterter ee			53.8 U	Diesel	54.3 U	56.8 U	56.2 U	55.6 U	Diesel	56.8 U
Eube Oil													108 U		109 Ú	114 U	112 U			114 U
NWTPH-Dx (mg/kg)														20-20-0-22-0-20-0-0-0-0-0-0-0-0-0-0-0-0						
TPH-Diesel Range								70,000	23,000				NA	549	NA	NA	NA	NA	224	NA
TPH-Kerosene Bange					100.00	T. 60							NA NA	NA	NA	NA NA	NA	NA NA	NA	NA NA
TPH-Motor Oil Range						-							NA	983	NA	NA	NA	NA	344	NA
NWTPH-G (mg/kg)						- 1														
TPH-Gasoline Range								22,000	13.000		80.000	110	NA	NA	NA	NA	NA	NA	NA	NA
, i							1	·			,									
PRIORITY POLLUTANT						- 1														
METALS (mg/kg)																				
Arsenic (7060)	1.6 (h)	29 38	10 (i)	29 (i)		60 (i)	5 (j) 23.1	-					1.9	4.5	2.62	2.30	2.57	2.15 21.3	3.79	2.80
Chromium (6010) Copper (6010)	450 41.000	38	1 (h)(k) 100	340,000 (k) 390	4 (h)(k) 0 190	4 (h)(k) 50	19.1		-				10.7 11.6 J	13.9 14.5	20,0 15.3 J	17.5 15.4	19.3 20.5	21,3 19.00	22,4 46.0	17,9 18.1
Lead (7421)	800		50	4000		500	9 4	750	750	750		30	13.4 J	12.3	17.5	10.3	30.7	40.5	52.2	18.5
Nickel (6010)	20,000	130	30	625	320	200	21.4				-		10.3	16.9	15.6	20.1	19.9	21.3	20.3	19.2
Zine (6010)	100.000	12,000	50 (h)	20,000	60 (h)	200	60.2	11					66,4	77.5	73.5	93.5	92.5	95.3	179	712
							ŀ					ſ								
Cadmium (6010)	450	8	4	125	6	20			 (\$30) (\$60-500) (\$		1007-300		NA	NA	NA NA	NA	NA,	NA	NA	NA
Mercury (7471)	310	£3+0=	0.3	73	1.6	-0.1							NA	a se NA	NA	NA	NA NA	NA	NA.	NA
1		- 1					1			ı	- 1	l l								

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## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

Page 6 of 21

													0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-015.	0-0.5	0-0.5
	SCREENING CRITERIA																			
									Risk-	Based Concer	trations		COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP
											Volatilization to	Leaching to						G31 (0-0.5)		
Sample Identification:				_				Soil Ingestion, I			Outdoor Air	Groundwater	G6 (0-0.5)	G7 (0-0.5)	G10 (0-0.5)	G11 (0-0.5)	G15 (0-0.5)	Dup of G15 (0-0.5)	G17 (0-0.5)	G18 (0-0.5)
Laboratory Identification:		on 9 PRGs	Steate	Oregon			Background		Construction	Excavation	0		0108189-12	0108196-01	0108189-17	0108196-04	0108172-44	0108172-40	0108172-15	0108172-36
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/24/2001	8/27/2001	8/24/2001	8/27/2001	8/22/2001	8/22/2001	8/21/2001	8/22/2001
BETX (mg/kg)																				
EPA Method SW8021B																				
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	NA	NA	NA	NA	NA NA	NA NA	N.A.	NA NA
Ethylbenzene	400	13		3300 (f)				74,000	28,000				NA	tion to the second second second second	NA	NA	NA NA	. NA	NA.	≥NA :
Toluene	520	12	200	1440			**	68,000	39,000			180	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	420	210						24,000	19,000			100	NA NA				NA.	NA NA	NA.	NA NA
m,p-Xylene	420 (g)	210 (g)		-			**	24,000 (g)	19,000 (g)			-	NA	NA	NA	NA	NA	NA NA	NA	NA
o-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (9)	44-4-		100 (9)	NA.	NA NA	NA	NA_	NA NA	NA NA	NA NA	NA NA
BIOVING AND EVENTS ( A )							i					1								
DIOXINS AND FURANS (ng/kg) Total TEQ											-		NA	NA	NA	NA	NA	NA	NA	NA

Page 7 of 21

## BZTO104(e)023447

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

												0-0,5	0-0,5	0-0,5	040.5	0+0.5	0-0.5	0-0,5	0-0.5
						SCREENING (	CRITERIA												
						T		Risk	Based Conce			COMP	COMP	COMP	COMP		COMP	COMP	
Complete Street							Soil Ingestion, D		and Intertesia	Volatilization to Outdoor Air	Leaching to Groundwater	C40 (0.0.5)	BA7 (0-0.5)	BA8 (0-0.5)	BA19 (0-0.5) Dup of BA8 (0-0.5)	BA9 (0-0.5)	D440 (0.0.5)	DA11 (0.05)	ED 1/004 5 004 (0.0.5)
Sample Identification: Laboratory Identification:	EPA Regis	on 9 PRGs		Oregon S	LVs	Background	Soil ingestion, L	Construction	Excavation	Outgoor Air	Groundwater	G19 (0-0.5) 0108172-48	0108196-20	108196-16	0108196-15	0108182-23	BA10 (0-0.5) 0108196-12	BA11 (0-0.5) 0108196-08	EP-VS015-001 (0-0.5) 0208160-19
Date Collected:	Industrial		Plants	Mammals	Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/22/2001	8/27/2001	8/27/2001	8/27/2001	8/23/2001	8/27/2001	8/27/2001	8/29/2002
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270						1													
2,6-Dinitrotoluene 2:Methylnaphthalene	620 190 (b)	0.0007 84 (b)	200 (a)	1440 (a) 3900 (b)		-						0.330 L 0.067 L	3.000			0.330 L 0.480	0.330 U 0.067 U		
Acenaphthene	29000	570	20	2900 (0)			41,000	16,000	-		-	0.067 L				2.800	0.067 U		
Acenaphthylene	190 (6)	84.(b)	10 (b)	3900 (b)								0.067 U			2:200	2,400	0.067 U		
Anthracene	100,000	12,000				••		90,000	-			0.067 U			1.900	14.000	0.067 ∪		NA
Benzg(a)anthracene	0.21	<b>2</b> 8		125			2. <b>7</b> 0.27	21	590 59		-	0.360 J 0.700	0.067 U 0.110 J	8.700 16.000 J	6,200 11,000 J	33.000 36.000	0.067 U 0.083 J	0.360 0.560 J	NA NA
Benzo(a)pyrene Benzo(b)fluoranthene	2.1	8 5		120			0.27	4.1	39			1:200 J	0.210	28.000	20.000	72,000	0.140	1,100	NA NA
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)		••				-		0.820	0.067 U	15.000 J	10.000 J	39.000	0.083 J	0.480 J	NA
Benzo(k)fluoranthene	21	49					27	210	5900	- 10 a		0,370	0.067 U		6.500	20.000	0.067 U		
bis(2-Ethylhexyl)phthalate Butylbenzylphthalate	120 100,000	3600 (c) 930		1020	4.5 4.5 (d)	-	-					0.073 0.067 U	0.068 U 0.067 U	1.900 0.067 L	2.100 0.067-U	0.670 U 0.670 U			
Carbazole	86	0.6	-		9.0(0)		-				TO SHALL THE SECOND SHALL BE	0.067 U				7.800	0.067 U	0,067 U	
Chrysene	210	160					270	2100	59,000		T WATE	0.510 J	0.067 U		6.700 J	37.000	0.067 U	0.420 J	
Dibenz(a,h)anthracene	0.21	2		TOTAL CONTROL			0.27	2.1	59	TESTS - Amiliaire		0.067 U				2.300	0.067 U	0.067 U	
Dibenzofuran Diethylphthalate	1600 100,000	3600 (c)	200 (e)	0.002 30.000 (e)	0.45 (e)							0.067 U 0.067 U				1.400 0.067 U	0.067 U 0.067 U	0.067 U	
Dimethylphthalate	100,000	3600 (c)			0.45 (e) -						1.81.00.00.0	0.067 U				0.067 U			
Di-n-Butylphthalate	62,000	2300	200	30,000	0.45				-	-		0.067 U		0.067 L		0.670 ∪		0.067 U	
Di-n-Octyl phthalate	25,000	10:000	200 (e)	30,000 (e)	0.45 (e)							0.067 U		0.067 L		0.670 U			
Fluoranthene Fluorene	22,000 26,000	4300 560			30		29,000 35,000	8900 12,000				0.990 J 0.067 Ú	0.150 J 0.067 U	20.000 J 0.250 J		96.000 4.800	0.096 J 0.067 년	1.100 J	NA NA
Hexachloroethane	120	0.5				-	-				-	0.130 U		0.130 L		0.130 U		0.130 U	
Indeno(1,2,3-cd)pyrene		14					27	21	590			0.570	0.067-U	10.000	7,100	25,000	0,067 U		NA NA
Naphthalene Pentachlorophenol	190	84 0.03	10	3900 30			770	710	20,000	-	15	0.067 U 0.330 U		0.110 0.330 U	0.190 0.330 U	0.490 3.30 U	0.130 U	0.130 U 0.330 U	
Phenanthrene	190 (b)	84 (b)										0.360 J	0.067 U	8,200	6.300	72,000	0.100	0.510	NA NA
Pyrene	29,000	4200	Male			***	21,000	6700				1. <b>200</b> J				95,000	0.120 J		
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM																			
Acenaphthene	29.000	570	20				41,000	16,000		_		NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	190 (b)	-84 (b)	10 (b)	3900 (b)	4								NA	NA :	, NA	NA '	NA	·NA:	NA -
Anthracene	100,000	12,000					-	90,000	590			NA	NA NA	NA NA	NA NA	NA NA	NA.	NA	NA 0.0887
Benzo(a)anthracane Benzo(a)ovrene	2.1 0.21	8		125		-	2.7 0.27	21 2.1	59			NA NA	NA NA	NA.,	NA NA	NA NA	NA III NA	NA NA	0.0887
Benzo(b)fluoranthene	2.1	5	A100 A100 A100 A100 A100 A100 A100 A100	120								NA.	NA.	NA.		NA.	NA E	NA NA	0.258
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)								NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	<b>21</b> 210	49 160					27 270	210 2100	5900 59.000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0713 U 0.152
Chrysene Dipenz(a,fi)anthracene	0.21	160					0.27	2100	59,000		-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0347
Fluoranthene	22,000	4300					29,000	8900	**	**		NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	26,000	560					35,000	12,000				NA			NA.	NA_	NA_	NA.	
Indeno(1,2,3-cd)pyrene	2.1 190	14 84	10	3900			2.7 770	21 710	590 20,000	-	15	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	0.157 NA
Naphthalene Phenanthrene	190 190 (b)	84 (b)	10	3900				/10	20,000	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Pyrene	29,000	4200	44.7		4	- 4	21,0(x)	6700				NA NA	NA	NA .		NA.	NA NA	NA NA	
CHLORINATED PHENOLS (mg/kg Method 8040/8270SIM	)																		
Pentachlorophenol	9.0	0.03	3	30	4							NA	NA	NA	NA	NA	NA	NA	NA
- Chacherophores	U.U				•														

 TABLE C-4a Page 8 of 21

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

	SCREENING CRITERIA												0-0.5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	9-0.5
							SCREENING (	CRITERIA												
			T						Risk-	Based Conce			COMP	COMP	COMP	COMP		COMP	COMP	
Comple Identification								Soil Ingestion, D	nemal Cantnat	and Inhalating	Volatilization to Outdoor Air	Leaching to Groundwater	G19 (0-0.5)	BA7 (0-0.5)	BA8 (0-0.5)	BA19 (0-0.5) Dup of BA8 (0-0.5)	BA9 (0-0.5)	DA10 (0.05)	BA11 (0-0.5)	P-VS015-001 (0-0.5)
Sample Identification: Laboratory Identification:	EPA Regi	ion 9 PRGs		Oregon	SLVs		Background	Soli ingestion, L	Construction	Excavation	Outdoor Air	Grounowater	0108172-48	0108196-20	108196-16	0108196-15	0108182-23	BA10 (0-0.5) 0108196-12	0108196-08	0208160-19
Date Collected:		DAF=20	Plants	Mammals		Inverts	Duckground	Occupational	Worker	Worker	Occupational	Occupational	8/22/2001	8/27/2001	8/27/2001	8/27/2001	8/23/2001	8/27/2001	8/27/2001	8/29/2002
VOLATILES (mg/kg)								1												
EPA Method SW8260	İ										i	1								
1,2,4-Trimethylbenzene	170		-	3300 (f)				1500	1400	40,000	790	55	0.001 U	0.001 U	0.00178	0.00169	0.001 U	0.002 U	0.002 U	NA
1,2-Dibromoethane	0.073							0.033	0.25	===7.1	1.7	0,000059	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0,001 U	0 001 U	NA NA
1,3,5-Trimethylbenzene	70			3300 (f)				1500	1400	40,000		12	0.001 U	0.001 U	0.00113	0.00108	0.001 U	0.002 U	0.002 U	NA
2-Butanone	110,000												0.005 U	0 005 U	0.005 U		0.005 U	0.005 Ü		
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)							-		0.001 U	0.001 U	0.001 U		0.001 U	0.002 U	0.002 U	NA
Acetone Benzene	54,000 1.4	16 0.03		1250 - 3300			-	34	340	9400	48	0.052	0.005 U 0.001 U	0.005 U 0.001 U	0.005 U 0.001 U		0.005 U 0.001 U	0.005 U 0.001 U	0.005 U 0.001 U	NA NA
Carbon Disulfide:	720	32				Marin Marin		34	340			0.052	0.001 0		0.001 U		0.001 U	U.100.0		NA NA
Ethylbenzene	400	13		3300 (f)				74.000	28,000		- 100 W/ - 100 C / 100 C		0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	NA
Isopropylbenzene	2000		and the same	2300 (t)				51,000	24 000				0 001 U		0.001 U		0.001 U	0.001 U		NA NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)		4-	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
Methyl lodide													0.001 U	.0:001=U	0.001 U	0.001 U	. 0.001 U	0.001 U	0.001 U	NA NA
Methyl tert-butyl ether	70							760	9000		720	0.30	NA	NA	NA.	NA NA	NA	NA	NA	NA
Naphthalene	190	84	Section of the section of					770	710	20,000		15	0.010 U				0,010 U			NA NA
n-Butylbenzene	240		552-5000-55	3300 (f) 3300 (f)				19,000 ==			**		0.002 U	0.002 U	0.002 U		0.002 U	0.004 U	0.004 U	NA
n-Propylbenzene o-Xylene	240 420 (g)		1	3300 (t)				24,000 (g)	9360			100 (g)	0.001 U 0.001 U	0:001 U 0:001 U	0.001 U 0.001 U		0.001 U 0.001 U	0.002 U 0.001 U	0.002 U 0.001 U	NA NA
sec-Butyberzene	420 (g) 220	210 (g)		3300 (f)				24,000 (g)	19,000 (g)		1	100 (g)	0.001 U		0.001 U		0.001 U	0.002 U		NA NA
tert-Butylbenzene	390			3300 (f)	en-entricade	MARKET PRESENTED		002-00-007-0-007-00-0					0.001 U	0.001 U	0.001 U		0.001 U	0.002 U	0.002 U	NA NA
Toluene	520	12	200	1440				58,000	39,000	Te - 02-10-10		180		0.001 U						
577792527758				CONTROL OF SCHOOLS	POLICE OF THE PERSON				92 Block 12-5 (1487) 5 (1487) 5 (1	AND DAMES AND A SECO	Springerick promption in Allend Corne	C-1.20119617961720	D0000000000000000000000000000000000000	and and property and an extension of	SAME A COMMENSATION OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF T	P-010,01, John John John Spr. 1838 N. 009	02.100			
HYDROCARBONS (mg/kg)			1									. [								
NWTPH-HCID																				
Gasoline		-	***	-				22,000	13,000		80,000	110	23.0 U	22.5 U	21.7 U	21.7 U	22.2 U	21.7 U	21.7 U	NA
Kerosene					74.								57.5 U		54.3 U		55.6 U	54.8 U	54.3 U	NA NA
Diesel								70,000	23,000				57.5 U	56.2 U	Diesel	Diesel	Diesel	54.3 U	54.3 U	NA
Lube Oil				•									115 U	112 U	Lube Oil	Lube Oil	Lube Oil	Lube Oil	109 U	NA NA
NWTPH-Dx (mg/kg)																				
TPH-Diesel Range		**						70.000	23.000		_		NA	NA	266	295	496	25.1	NA	NA
TPH-Kerosene Range		-	-	70		144			ter en en	AL BA	Publik Gis		NA.	NA -	NA.	NA	NA	NA .	NA	NA .
TPH-Motor Oil Range							**				-		NA	NA	722	652	766	105	NA	NA
NWTPH-G (mg/kg)			1								i									
TPH-Gasoline Range	~~							22,000	13.000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA
								,	,		,									
PRIORITY POLLUTANT			l																	
METALS (mg/kg)			ĺ											_						
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i)	60 (i)	5 (j)		Y7				2.45	3.12	5.60	6.32	3.49	2.89	2.59	NA
Chromium (6010)	450	38	1 (h)(k)	340,000 (k)		0 4 (h)(k)	23.1			ne salt nessys			18.3	18.2	19.0	21,4	25	15.1	16.2	NA
Copper (6010)	41,000	-	100	390 4000	190	50 500	19.1	750	750	750		30	23.1	15.3 11.7	36.9 26.2	38.3 25.9	52.9 42.2	15.8 12.6	12.3 14.3	NA
Cead (7421) Nickel (6010)	800) 20,000	130	50 30	4000 625	<b>16</b> 320	200	9 21.4	/50	750	750			18.6	19.0	26.2j 18.0	25,9 20,1	42.2 23.9	12.6 16.5	14.3 12.2	NA NA
Zinc (6010)	100.000	12,000	50 (n)				602						201	56.1	86.4	95.1	23.9 151	72.4	65.5	NA NA
- Andrews		12,000	www.quay	- MANAGE	A. A. A.				21-12-12-12-12-12-12-12-12-12-12-12-12-1		THE PERSON NAMED IN	MARIO SERVICIONES MEDITO	ore asta-timental (cil				NOW !		The second second second	
Cadmium (6010)	450	8	4	125	6	20						[	NA	NA	NA	NA	NA	NA	NA	
Mercury (7471)	310		0.0	73	1.5	0.1								- NA	NA.	NA III	NA NA	NA	NA NA	NA
												1								

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TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT)

PHASE III RI

Page 9 of 21

															0-0.5	0-0:5	0-0.5	0-0.6	0-0.5	0-0.5
							SCREENING C	RITERIA												
									Risk-	Based Concer			COMP	COMP	COMP	COMP		COMP	COMP	
			l								Volatilization to					BA19 (0-0.5)				ED 1/02/1 /
Sample Identification: Laboratory Identification:	EDA Desi	0 DDO-		Oregon	CLV			Soil Ingestion, D			Outdoor Air	Groundwater	G19 (0-0.5) 0108172-48	BA7 (0-0.5) 0108196-20	BA8 (0-0.5) 108196-16	Dup of BA8 (0-0.5) 0108196-15	BA9 (0-0.5) 0108182-23	BA10 (0-0.5)		EP-VS015-001 (0-0.5) 0208160-19
Date Collected:	Industrial	on 9 PRGs DAF=20	Plants	Mammals		Inverts	Background	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	8/22/2001	8/27/2001	8/27/2001	8/27/2001	8/23/2001	0108196-12 8/27/2001	0108196-08 8/27/2001	8/29/2002
	madama	DAI -20	T Idillo	Mannais	Dires	HIVOIG		Occupational	Worker	WORKE	Occupational	Conspinional	0.2252001	GENEDOI	OR TIZOUT	GENEGOT	G-EGIZOUT	UZ 17Z GOT	GZ//LOO!	GEORGOE
BETX (mg/kg) EPA Method SW8021B																				
Benzene	1.4	0.03	emaken Transcore	3300				34	340	9400	48	0.052	NA NA	NA_	NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13	-					74,000	28,000				NA.	NA.		NA NA	NA.	NA.	NA.	NA -
Toluene	520	12	200	1440				68,000	39,000	-96000000000000000000000000000000000000		180	NA NA	NA	NA NA	NA	NA	NA	NA	NA NA
Xylenes, Total	420	210						24,000			No. 10 Avenue	100	NA.	NA		NA NA		NA NA	NA NA	NA.
m,p-Xylene	420 (g)	210 (g)					-	24,000 (9)	19,000 (g)	and the control of th			NA NA	NA_	NA	NA NA	NA	NA	NA	NA NA
o-Xylene	420 (g)	210 (g)		V				24,000 (g)	19,000 (g)	A MARKET		100 (g)	18A	NA.	NA_	ANA S	. NA	NA	NA	NA NA
DIOXINS AND FURANS (ng/kg)		_								н-			NA.	NA	NA	NA.	NA	NA	NA	NA
TOME TES			1 "			- 1		_				1		1474	,,,,		11/3	1473	1373	101

TABLE C-4a
SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL:
EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT)

Page 10 of 21

PHASE III RI

													0-0.5	0-0.5	0-0.5	0-0.6	0-0.6	0-0.5	0-0.5
						SCREENING (	CRITERIA							-					
								Risi	-Based Conce										
Sample Identification:							Soil Incestion	, Dermal Contac	t, and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	EP-VS015-002 (0-0.5)	EP-VSR-001 (0-0.5)	G07-3 (0-0.5)	G07-4 (0-0.5)	G07-5 (0.0.5)	G10-4 (0-0.5)	G10-5 (0-0.5)	G11-3 (0-0.5)
Laboratory Identification:	EPA Regio			Oregon SL		Background		Construction	Excavation			0208160-20	0208160-223	0309196-18	0309196-21	0309196-24	0309196-27	0309196-44	0309196-29
Date Collected:	Industrial	DAF≂20	Plants	Mammals 6	Birds Inverts		Occupationa	l Worker	Worker	Occupational	Occupational	8/29/2002	8/29/2002	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003
SEMIVOLATILES (mg/kg)	İ									ŀ		•							
EPA Method SW8270 2.6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								NA.	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	190 (6)	84 (b)	10 (b)	Mary - money				10.00		4-11		NA NA	NA NA	NA.	NA.	NA NA	NA NA	NA.	NA.
Acenaphthene	29000	570	20				41,000	16,000				NA NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene Anthracene	190 (b) 100,000	84 (b) 12,000	10 (b)	3900 (b)				90,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	21	2		and the second	e v kra		27	21	590	W		NA NA	NA .	NA.	NA.		NA NA	NA.	NA NA
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59			NA NA	NA	NA	NA	NA NA	NA NA	NA	NA
Benzo(b)fluoraethene Benzo(g,h,i)perylene	2.1 190 (b)	5 84 (b)	10 (b)	3900 (b)						-		NA NA	NA NA	NA. NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene	21	49	10(0)				27	210	5900			NA.	NA NA	NA NA	NA.		NA NA	NA NA	NA.
bis(2-Ethylhexyl)phthalate	120	3600 (c)			4.5							NA NA	NA	NA	NA	NA NA	NA	NA	NA
Butylbenzylphthalate Carbazole	100,000	930 0.6		1020 (d) 4	5 (d)						0 V-1-E	. NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	210	160					270	2100	59.000			NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	
Dibenz(a,h)anthracene	0.21	2		-			0.27	2.1	59	-	-	NA NA	NA NA	NA	NA	NA	NA	NA	NA
Dibenzoturan Diethylphthalate	100,000	3600 (c)	200 (e)	0.002 30.000 (e) 0.4	45 (e)	1050					A E T T	NA NA	NA NA	NA. NA	NA NA	NA NA	NA NA	NA NA	
Dimethylphthalate	100,000	3600 (c)			15 (e)							NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA I	NA NA
Di-n-Butylphthalate	62,000	2300	200		).45			-				NA NA	NA	NA	NA	NA	NA	NA	NA
Di-n-Octyl phthalate	25,000	10.000	200 (e)	30.000 (e) <b>0.</b> 4	15 (e)		00,000	2000				NA .		NA NA	NA.	- NA	NA.		NA .
Fluoranthene Fluorene	22,000 26,000	4300 560			30	-	29,000 35,000	8900 12,000			-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Hexachloroethane	120	0.5										NA NA	NA	NA	NA	NA	NA NA	NA	NA
Indeno(1,2,3 cd)pyrene	21	14					2.7		590			NA.	NA.	NA	NA NA	NA .		NA	NA NA
Naphthalene Pentachlorophenol	190 9:0	84 0.03	10				770	710	20,000		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	190 (b)	84 (b)	-						**			NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	29,000	4200					21,000	6700				NA.	NA	NA NA	NA	NA.	NA "	NA NA	NA -
SEMIVOLATILES (mg/kg)									i										
EPA Method SW8270SIM																			
Acenaphthene	29,000	570	20			enter visitation i materialità	41,000	16,000	ENGRADEN AND THE REST		A STATE OF THE STA	NA NA	NA	0.118	0.0387	0.00667 U			0.00667 U
Acenaphthylene Anthracene	190 (b) 100,000	84 (b) 12,000	10 (b)	3900 (b) =				90.000				NA NA	NA.	-0.744 1.09	0.263 0.404	0.02 0.014	0.012	0.00667 U 0.00667 U	0.0207 0.014
Benzo(a)anthracene	21	2					2.7	21	590			0.02	0.215	8.27	3.05	0.132	0.0407	0.024	0.148
Benzo(a)pyrene	0.21	8		125		<u> </u>	0.27	2.1	59		**	0.0347	0.53	9.24	2.79	0.297	0.068	0.0447	0.285
Benzo(b)fluoranthone Benzo(g,h,i)perylene	2,1 190 (b)	6 84 (b)	10 (b)	3900 (b)								0.0387 NA	<b>0.538</b> NA	12.4	3,65 0.92	0.366 0.134	0.101 0.022	0.0507 0.046	0,315 0.315
Benzo(k)fluorantliene	21	49	10 (15)	3300 (8)			27	210	5900			0.0127 J	0.165 J	3.8	1.16	0.107	0.0287	0.016	0.078
Chrysene	210	160		SD - Philosophic - March			270	2100	59,000	-	randilino linin visita rotani	0.028	0.27	10	3.56	0.176	0.044	0.0273	0.204
Diberiz(a.li)arithracene Fluoranthene	0.21 22,000	4300		CALL PROPERTY TOWNS THE PARTY OF		-	0: <b>27</b> 29,000	2 1 8900	.59			0.00667 U NA	0.0687 NA	0.66 24.5	9.2	0.028 0.305	0.00667 U 0.0807	0.00867 0.048	0.054 0.466
Filiorene	26,000	560					35,000	12)000				NA NA	NA NA	0.247	0.09	0.303 0.60667 U	0.00667 U	0.00667 U	0.00667 U
Indeno(1,2,3-od)pyrene	2.1	14					2.7	21	590	**	**	0.026	0.306	2.6	1.27	0.115	0.02	0.0333	0.223
Naphthalene Phenanthrene	190 190 (b)	84 (b)	10	3900			770	710	20,000		15	NA NA	NA NA	0.0967 10.9	0.0413 4.44	0.014	0,00667 U 0,0307	0.00667 U 0.0127	0.00667 U 0.13
Pyrene	29,000	4200				-	21,000	6700				NA NA	NA NA	28.9	13.6	0.483	0.0307	0.0673	0,605
		- APPENDED TO THE PERSON NAMED IN										an encount see Topico capitations		ini. est in alimentale de	OF SECURITY STATES				
CHLORINATED PHENOLS (mg/kg Method 8040/8270SiM	)																		
Pentachlorophenol	9.0	0.03	3	30	4							NA	NA	NA	NA	NA	NA	NA	NA

7/19/05 \(\text{Left}\) \(\tex

Page 11 of 21

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

											0.0.5	0-0,5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
					SCREENING	CRITERIA												
							Risk	-Based Concer	ntrations									
									Volatilization to	Leaching to								
Sample Identification:	#B. B			01.17-		Soil Ingestion, I			Outdoor Air	Groundwater	EP-VS015-002 (0-0.5)	EP-VSR-001 (0-0.5) 0208160-223		G07-4 (0-0.5)	G07-5 (0.0.5)	G10-4 (0-0.5)	G10-5 (0-0.5)	G11-3 (0-0.5)
Laboratory Identification: Date Collected:	EPA Region 9 PRGs Industrial DAF=20	Plante	Oregon : Mammals		Background	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	0208160-20 8/29/2002	8/29/2002	0309196-18 9/29/2003	0309196-21 9/29/2003	0309196-24 9/29/2003	0309196-27 9/29/2003	0309196-44 9/29/2003	0309196-29 9/29/2003
	Industrial DAI =20	I IEIIIG	William	Dida involv	<del>'</del>	Оосиранона	TTOIRCE	Trontor	Сссаралона	L	GEOVEGGE	G/EG/EGGE.	372372000	0/E0/E000	0/E0/E000	U/ZU/ZUUU	BIZUIZUU	3/23/2003
VOLATILES (mg/kg)										1								
EPA Method SW8260	170		0000 (6)			1500	1400	40,000	790	55	NA.	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene 1,2-Dibromoethane	0.073		3300 (f)			0.033	0.25	7.1	1,7	0.000059	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA I	NA NA
1,3,5-Trimethylbenzene	70		3300 (f)		in selection control	1500	1400	40.000		12	NA.	NA NA	NA.	NA.	NA NA	NA NA	NA NA	NA
2-Butanone	110,000										NA.	NA.	NA .	NA.	NA.	NA NA	NA NA	
4-Isopropyltoluene	520 (a) 12 (a)	200 (a)	1440 (a)		-	-		-			NA	NA	NA	NA	NA	NA	NA	NA
Acetone	54,000 16	-				-				10 146 W	NA.		NA	NA	NA	NA.	NA	NA P
Benzene	1.4 0.03	TOTAL SAME TOTAL	3300		1	34	340	9400	48	0.052	NA NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	720 32		3300 (f)			74.000	28.000				NA.	NA-	NA NA	NA "	NA .	NA.	NA.	NA NA
Ethylbenzene Isopropylbenzene	400 13 2000					74,000	24,000			*	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
m,p-Xylene	420 (g) 210 (g)		0200 (I)		-	24,000 (g)	19,000 (g)		-		l NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA
Methyl lodide	420 (g) 210 (g)						10,000 (g)				NA .	NA NA	NA NA			NA NA	NA I	
Methyl tert-butyl ether	70	-				760	9000		720	0.30	NA NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	190 84	10	3900			770	710	20,000		15	NA .	······································	NA-	NA.	NA.	NA:	NA	NA.
n-Butylbenzene	240		3300 (f)						-		NA.	NA	NANA	NA	NA	NA	NA	NA
n-Propylbenzene	240		3300 (f)			19,000	9300				NA NA	NA NA	NA NA	NA.	NA.	NA.	NA	- NA
o-Xylene	420 (g) 210 (g) 220	1_	3300 (f)		-	24,000 (g)	19,000 (g)			100 (g)	NA NA	NA NA	NA NA	NA NA	NA .	NA NA	NA	NA
sec-Butylbenzene tert-Butylbenzene	220 ···		3300 (f)			7.00					NA NA	NA NA	NA NA	NA NA	NA: NA	NA NA	NA NA	NA NA
Toluene	520 12	200		-22		68,000	69,000			-180	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	The Article Co. Committee of Co. Co. Co. Co. Co. Co. Co. Co. Co. Co.	DARK THE THE	7.00				Sand State of the	Rest Transaction and Consumings				PROPERTY OF THE PROPERTY OF TH		Transport territory			THE STORY TO MAKE THE	
HYDROCARBONS (mg/kg)																		
NWTPH-HCID																		
Gasoline					<u> </u>	22,000	13,000		80,000	110	NA NA	NA	NA	NA	NA NA	NA	NA	NA
Kerosene				AND BUILDING							NA .	NA NA	NA -	NA NA	NA -	NA .	NA.	NA :
Diesel			 34-41 6 180 (H008)			70,000	23,000			15:12:1980: 12:35:14:19	NA	NA	NA	NA	NA	NA	NA	NA
(Lube Oil			-	-					14.14		NA NA	NA NA	NA	NA.	NA NA	NA NA	NA NA	, NA
NWTPH-Dx (mg/kg)																		
TPH-Diesel Range						70,000	23,000	man commence and the second			NA NA	NA	NA	NA	NA	NA	NA	NA NA
TPH-Kerosene Hange										- V	MA E	NA :	NA	NA	NA NA	NA	NA 1	NA
TPH-Motor Oil Range								-			NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)																		
TPH-Gasoline Range						22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA
DOLOGIEV DOLLUTANT					1													
PRIORITY POLLUTANT METALS (mg/kg)	İ																	
Arsenic (7060)	1.6 (h) 29	10 (i)	29 (i)	10 (i) 60 (i)	5 (j)						NA	NA	NA	NA	NA	NA	NA	NA.
Chromium (6010)	450 38			4 (b)(k) 0.4 (b)(l	3 23.1						NA NA	NA NA	NA NA	NA NA	NA NA	NA -	NA NA	
Copper (6010)	41,000	100	390	190 50	19.1		**			-	NA	NA	NA.	NA	NA	NA	NA	NA
Lead (7421)	800	50	4000	16	9	750	750	750		30	NA NA	NA	18.8	5.07	5.87	19.7	1.88 U	1.85 U
Nickel (6010)	20,000 130	30	625	320 200	21.4		TSORK CONTROL OF			-	NA	NA	NA	NA	NA	NA	NA NA	NA
Zinc (6010)	100,000 12,000	50 (h)	20,000	60 (h) 200	60.2						NA NA	NA	97.9	70,3	102	68.9	57.7	86.6
Cadmium (6010)	450 8	4	125	6 20				[					NA	NA	NA	NA	NA	NA
Mercury (7471)	310 -	0.3	73	1.5 0.1					-		NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	
AND THE PARTY OF T			CONTRACTOR OF THE PARTY OF THE					ar was over an a little	ALTERNATION CONT.			THE CHIEF BUT AND THE SERVE	wood and the contract of the c	AND DESCRIPTION OF THE PARTY OF	TO SHEET WAS A SHEET OF THE PARTY OF THE PAR			20 27 PM
	,				•	•		•	'									

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

0-0.5 0-0.5 0-0.5 0-0.5 SCREENING CRITERIA Risk-Based Concentrations Volatilization to Leaching to Sample Identification: Soil Ingestion, Dermal Contact, and Inhalation Outdoor Air Groundwater P-VS015-002 (0-0.5) EP-VSR-001 (0-0.5) G07-3 (0-0.5) G07-4 (0-0.5) G07-5 (0.0.5) G10-4 (0-0.5) G10-5 (0-0.5) G11-3 (0-0.5) tory Identification: EPA Region 9 PRGs
Date Collected: Industrial DAF=20 Laboratory Identification: Oregon SLVs Background Construction Excavation 0208160-20 0208160-223 0309196-18 0309196-21 0309196-24 0309196-27 0309196-44 0309196-29 Worker 8/29/2002 8/29/2002 9/29/2003 9/29/2003 BETX (mg/kg) EPA Method SW8021B NA Benzene 1.4 0.03 3300 340 9400 0.052 NA NA NA NA NA Ethylbenzene NA NA NA NA 74,600 28,000 NA. NA NA NA NA -400 13 3300 (1) 520 200 1440 39,000 180 NA NA NA Toluene 12 68,000 NA NA NA 24,000 19,000 ---19,000 (g) --NA NA NA NA NA NA ... NA Xylenes, Total 210 100 420 (g) 210 (g) 24,000 (g) 19,000 (g) ... 24,000 (g) 19,000 (g) ... NA NA NA NA NA NA NA m,p-Xylene NA 420 (9) o-Xylene 210 (g) \_100 (g) NA NA NA DIOXINS AND FURANS (ng/kg) Total TEQ NA NA NA

Page 12 of 21

TABLE C-4a Page 13 of 21

TABLE C-4a
SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL:
EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT)
PHASE III RI

								0-0.6	0-0,5	0-0.5	0-0.6	0-0.5	0-0.5	0-0.5	0-0.6	0-0.5
1			SCREENING C	RITERIA												
		1			Risk-Based Co	ncentrations		1								
						Volatilization to										
Sample Identification:				Soil Ingestion, D	Dermal Contact, and Inhal		Groundwater	G15-4 (0-0.5)	G15-5 (0-0.5)	G15-6 (0-0.5)	G17-4 (0-0.5)	G17-5 (0-0.5)	G17-6 (0-0.5)	G19-3 (0-0.5)	G19-4 (0-0.5)	G19-5 (0-0.5)
Laboratory Identification: Date Collected:	EPA Region 9 PRGs Industrial DAF=20	Oregon SLVs Plants Mammals Birds Inverts	Background	Occupational	Construction Excavat Worker Worke		Occupational	0309196-38 9/29/2003	0309196-10 9/29/2003	0309196-35 9/29/2003	0309196-07 9/29/2003	0309196-01 9/29/2003	0309196-04 9/29/2003	0309196-13 9/29/2003	0309196-32 9/29/2003	0309196-41 9/29/2003
	ingustriai DAF≐20	Flants Manifilats Blids lifterts	<del>                                     </del>	Cocupational	WORKET WORKE	1 Occupational	Occupational	9/29/2003	3/28/2003	9/29/2003	5/25/2003	9/29/2003	9/28/2003	9/28/2003	5/25/200a	872872000
SEMIVOLATILES (mg/kg)																
EPA Method SW8270	000 0007	200 (a) 1440 (a)		1 1			1	NA.	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene 2-Mothymaphthalene	620 <b>0.0007</b> 190 (b) 84 (b)	200 (a) 1440 (a) 10 (b) 3900 (b)						NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA	NA.	NA NA
Acenaphthene	29000 570	20		41,000	16,000			NA NA	NA.	NA NA	NA.	NA NA	NA NA	NA NA	NA	NA .
Acenaphthylene	190 (b) 84 (b)	10.(b) 3900 (b) = =					24 4	NA.	NA.		- NA		NA.	. NA	NA NA	NA
Anthracene	100,000 12,000		-		90,000			NA.	NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA
Benzo(a)anthracene	2.1			2.7	21 590			NA_	NA:	, NA	NA NA	NA NA	NA NA	NA_	NA NA	NΑ
Benzo(a)pyrene	0.21 8	125		0.27	2.1 59			NA NA	NA	NA NA	NA	NA NA	NA	NA	NA NA	NA NA
Benzo(b)fluoranthene Benzo(g,h,i)perylene	2.1 5 190 (b) 84 (b)	10 (b) 3900 (b)						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA. NA
Benzo(k)fluoranthene	21 49	10 (B) 3500 (B) = -		.27	210 5900			NA NA	NA NA	NA NA	NA NA		NA.	NA.	NA.	NA NA
bis(2-Ethylhexyl)phthalate	120 3600 (c)	1020 <b>4.5</b>				-	-	NA NA	NA	NA.	NA	NA	NA	NA	NA	NA .
Butylbenzylphthalate	100.000 930	- 1020 (d) 4.5 (d) -						NA.	NA NA	NA	NA		NA NA	NA NA	NA.	NA NA
Carbazole	86 0.6		-	-				NA.	NA	NA	NA	NA	NA NA	NA	NA	NA
Chrysene	210 160			270	2100 59,000			· NA	NA .	NA NA	NA.	NA	NA.	NA .		NÄ :
Dibenz(a,h)anthracene	0.21 2		-	0.27	2.1 59			NA NA	NA NA	NA	NA NA	NA NA	NA	NA	NA NA	NA NA
Dipenzofuran Diethylphthalate	1600 (c)	200 (e) 30,000 (e) 0.45 (e)				-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dimethylphthalate	100,000 3600 (c)	200 (e) 30,000 (e) 0.45 (e)			H			NA NA	NA NA	NA NA	NA NA		NA NA	NA I		NA NA
Di-n-Butylphthalate	62,000 2300	200 30,000 0.45						l NA	NA	NA	NA	NA	NA.	NA	NA	NA
DI-n-Octyl phthalate	25,000 10,000	200 (e) 30,000 (e) 0.45 (e)						NA NA	.NA_	NA NA	, NA	NA NA	NA :	NA.	NA I	NA
Fluoranthene	22,000 4300			29,000	8900			NA	NA	NA_	NA	NA	NA	NA	NA	NA NA
Fluorene	26,000 560	30 /		35,000	12,000			NA.	NA	NA	NA.	NA NA	NA /	NA NA	NA.	NA
Hexachloroethane	120 <b>0.</b> 5		STERNOVENS SHEET INDUSTRA	Charles and Committee				NA NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA
Indeno(1,2,3-cd)pyrene Nachthalene	2.1 14 190 84	10 3900		<b>2.7</b> 770	21 590 710 20.000		15	NA NA	NA; NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pentachlorochenol	9.0 0.03	3 30 4		770	710 20,000		100	NA NA	NA NA	NA NA	AND RESIDENCE AN	NA NA	NA NA	NA.	NA.	- NA
Phenanthrene	190 (b) 84 (b)			(F)(1)(4+)(2)(6)(2+)(4+)(4+)(4+)(4+)(4+)(4+)(4+)(4+)(4+)(4			- CHECKEL WALL SELVE	NA	NA	NA.	NA	NA NA	NA NA	NA	NA	NA
Fyrene	29,000 4200			21,000	6700			NA:	NA	NA.	. NA	- NA	- NA=.	NA	NA S	NA
SEMIVOLATILES (mg/kg)																
EPA Method SW8270SIM					40.000			0.00007.11	6.00007.11		0.0647	0.00667 U	0.00667 U	0.018	0.0153	0.00667 U
Acenaphthene Acenaphthylene	29,000 570 190 (b) 84 (b)	20 10 (b) 3900 (b)		41,000	16,000			0.00667 U 0.018	0.00667 U 0.064	0.00667 U 0.018	0.0647	0.0113	0.00667 0	0.096	0.0153	0.00667 U
Anthracene	100,000 12,000	10 (0) 00/0 (0)			90,000			0.018	0.0553	0.018	0.671	0.0147	0.0387	0.131	0.133	0.00667 U
Benzo(a)anthracene	21 2		40 元美 67 元	2.7	21 590			0.1	0.456	0.118	4 11	0,0733	0.078	0.962	1.15	0.0547
Benzo(a)pyrene	0.21 8	125	**	0.27	2.1 59			0.23	0.893	0.237	6.91	0.163	0.128	1.43	2.32	0.113
Benzd(b)fluoranthene	2.1 5	- A - 1 - 1 - 1 - 1 - 1 - 1						0,311	0.977	0.277	7.3	0.215	0,194	1.48	2.59	0.128
Benzo(g,h,i)perylene	190 (b) 84 (b)	10 (b) 3900 (b)						0.254	0.794	0.24	6.52	0.184	0.187	1.33	2.73	0.115
Benzo(k)fluoranthene	21 49 210 <b>160</b>			27 270	210 5900 2100 59,000			0.0827 0.145	0.272 0.597	0.0793 0.151	2.12 5.39	0.0707	0.0527 0.0907	0.511 1.17	0.77 1.57	0.042 0.068
Chrysene Dibenz(a,b)anthracene	210 160 0,21 2		_	0.27	21 59,000	والتعالم المراجع		0.0473	0.133	0.042	0.881	0.038	0.044	0.227	0.373	0.0213
Fluoranthene	22,000 4300			29,000	8900			0.263	1.52	0.277	13.9	0.161	0.142	2.77	3.71	0.103
Fluorene	26,000 560	- 30		35,000	12,000 ~~~~			0.00667 U		0.00667 U	0.173	6.00867 U	0.00867 U	0,04	0.028	0.00667_U
Indeno(1,2,3-cd)pyrene	2.1 14			2.7	21 590		-	0.185	0.583	0.173	4.81	0.136	0.144	0.983	1.89	0.0827
Naphthalene	190 84	10 3900		770	710 20,000		15	0.0147	0.016	0.012	0.0587	0.00667 U	0.038	0.0493	0.0507	0.018
Phenanthrene	190 (b) 84 (b)						-	0.06	0.437	0.082	7.56	0.0393	0.0707	1.46	1.18	0.0327
Pyrene	29,000 4 <b>200</b>	1 4 T W T T T T T T T T T T T T T T T T T	7.5	21,000	6700			0.367	2.1	0.387	17.2	0.21	0,16	3.75	4.89	0.143
CHLORINATED PHENOLS (mg/kg)	١	1	1			1	1									
Method 8040/8270SIM	,					1										İ
Pentachlorophenol	9.0 0.03	3 30 4	_				-	NA	NA	NA	NA	NA	NA	NA	NA	NA
		1	l İ													

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Page 14 of 21

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

												0-0:5	0.0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.6	0.0.5
ı						SCREENING C	RITERIA													
								Risk-	Based Concer	ntrations		]								
	ŀ					1				Volatilization to	Leaching to									
Sample Identification:	EDA D			Oregon	DI 14-		Soil Ingestion, D	ermal Contact Construction		Outdoor Air	Groundwater	G15-4 (0-0.5) 0309196-38	G15-5 (0-0.5) 0309196-10	G15-6 (0-0.5) 0309196-35	G17-4 (0-0.5) 0309196-07	G17-5 (0-0.5) 0309196-01	G17-6 (0-0.5) 0309196-04	G19-3 (0-0.5) 0309196-13	G19-4 (0-0.5) 0309196-32	G19-5 (0-0.5) 0309196-41
Laboratory Identification: Date Collected:	EPA Region Industrial	DAF=20	Dinets	Mammals	Birds Inverts	Background	Occupational	Worker	Excavation	Occupational	Occupational	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003
	iliuusiliai	DAI =20	Figilia	Wallings	Directs (Interes	<del> </del>	Occupational	Worker	VVOIREI	Occupational	Occupational	O/EG/EGGO	0/20/2000	372.372.000	5/25/2000	3/23/2000	J/EU/EU00	S/ES/EGGS	0/10/2000	3/23/2000
VOLATILES (mg/kg)										ĺ		1								Ī
EPA Method SW8260 1,2,4-Trimethylbenzene	170			3300 (f)			1500	1400	40,000	790	55	NA.	NA	NA	NA	NA	NA	NA	NA	NA NA
1,2 Dibromoethane	0.073			3300 (1)			0.033	0.25	40,000	17	0.000059	NA NA	NA NA	NA NA	NA S	NA NA	NA NA		NA NA	NA NA
1,3,5-Trimethylbenzene	70			3300 (f)			1500	1400	40,000	#17#05-0M/A019-11666	12	NA	NA	NA.	NA	NA	NA	NA	NA NA	NA
2-Bulanone	110,000											NA .	NA.	NA .	NA NA	NA NA	NA NA	NA.	NA NA	NA NA
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)								NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	54,000	16		1250						2 2 2	Secretary Secretary	NA	NA NA	NA NA		NA NA	NA NA		- NA	NA
Benzene	1.4	0.03	romeone da	3300			34	340	9400	48	0.052	NA NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	720	32	-		* 1		-	00.000				NA.	. NA		NA NA	NA.	NA NA	NA -		NA.
Ethylbenzene	400	13		3300 (f)			74,000 51,000	28,000 24,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
rsopropylbenzene m.p-Xvlene	2000 420 (g)	210 (g)		3300 (I)			24,000 (g)	24,000 19,000 (g)				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Methyl lodide	420 (g)	210 (g)		NAME OF TAXABLE PARTY.			24,000 (g)	13,000 (g)				NA NA	NA NA	NA S		NA NA	NA.	NA.	NA i	NA.
Methyl tert-butyl ether	70	CONTRACTOR OF THE PARTY OF THE		***	merring market		760	9000	ALCOHOL APPROXIMATE	720	0.30	NA NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalerie	190	84	10	3900			770	710	20,000		16	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA.	NA NA
n-Butylbenzene	240			3300 (f)				*-				NA	NA	NA	NA	NA	NA	NA	NA	NA
n Propylbenzene	240		- AD	3300 (f)			19,000 -	- 9300				NA.	NA NA	NA .		. NA	NA		NA -	=: NA ==
o-Xylene	420 (g)	210 (g)	1				24,000 (g)	19,000 (g)			100 (g)	NA.	NA	NA NA	NA	NA	NA	NA	NA	NA
sec Butylbenzene	220										-410	NA	NA.	NA NA	NA NA	- NA	NA		NA.	NA NA
tert-Butylbenzene	390			3300 (f)	000000000000000000000000000000000000000			39,000			180	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	520	12	200	1440	* 3		68,000	29,0(8)			1.00	NA	OW.	THE STATE OF	140	1991	The second	OF THE LAM	NA-	NA
HYDROCARBONS (mg/kg)		- 1																		
NWTPH-HCID								40.000		00.000	440		NA	81.6	N/A			NA		
Gasoline Kerosene				<u></u>			22,000	13,000		80,000	110	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA N <b>A</b>
Diesel			-54135-35				70,000	23,000				NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA
							70,000	2.0,000				NA.					NA NA	NA NA	NA NA	NA
		WAR THE PERSON OF	SELECTION CONTRACT	200000000000000000000000000000000000000						AMERICAN TRANSPORT				200-100-100-00-00-00-00-00-00-00-00-00-00			Darker opply server			Commence of the Application of Section 1970.
NWTPH-Dx (mg/kg)								23.000			1	NA	NA		NA	NA	NA	NA	NA	NA
TPH-Diesel Range TPH-Kerosene Range							70,000	882-1001-1002-1001-				NA NA	NA NA	NA NA	NA NA	NA -	NA NA	NA NA	NA NA	NA NA
TPH-Motor Oil Bange		-								45		NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
· ·												1471	11/3	13/5	1171	747	110		101	1973
NWTPH-G (mg/kg)		1							ŀ					•••	***	812	***			1
TPH-Gasoline Range						-	22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA	NA NA
PRIORITY POLLUTANT																				- 1
METALS (mg/kg)									1											
Arsenic (7060)	1.6 (h)	29	10 (l)	29 (i)	10 (i) 60 (i)	5 (1)						NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (6010)	450			340.000 (k)		23.1						NA:	NA NA	NA .	NA NA	NA	NA NA	NA NA	NA	NA.
Copper (6010)	41,000		100	390	190 50	19.1						NA	NA	NA	NA_	NA	NA	NA NA	N.A.	NA
Lead (7421)	800		50	4000	16 500	9	750	750	750		30	16.3	76,5	12.7	43	11,9 J	28	158	236	6,96
Nickel (6010)	20,000	130	30	625	320 200	21.4		TORREST OF THE SAME	-			NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (6010)	100,000	12.000	50 (h)	20,000	60 (h) 200	60.2						77.7	73	63.9	148	80.8 J	410	87.1	197	228
		_ 1	_						- 1					***	NIA	814		NI A		
Cadmium (6010)	450	8	4	125	6 20 1.5 <b>0.1</b>							NA NA =	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Mercury (7471)	310		0.3		. 1.0 0.1							AK:	POY.	AND DESCRIPTION OF THE PARTY OF	HA.	NA	ALIVA SE		INA	1924
ı						, ,			ı	ŀ	'									'

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

Page 15 of 21

													0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
							SCREENING C	RITERIA		•						_				-	
ľ									Risk	-Based Concer	trations										
											Volatilization to										
Sample Identification:								Soil Ingestion, D			Outdoor Air	Groundwater	G15-4 (0-0.5)		G15-6 (0-0.5)	G17-4 (0-0.5)	G17-5 (0-0.5)	G17-6 (0-0.5)	G19-3 (0-0.5)	G19-4 (0-0.5)	G19-5 (0-0.5)
Laboratory Identification:	EPA Regi			Oregon S			Background		Construction				0309196-38	0309196-10	0309196-35	0309196-07	0309196-01	0309196-04	0309196-13	0309196-32	0309196-41
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds I	nverts		Occupational	Worker	Worker	Occupational	Occupational	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003	9/29/2003
BETX (mg/kg)																					
EPA Method SW8021B							i														
Benzene	1.4	0.03		3300		-	**	34	340	9400	48	0.052	NA.	NA	NA	NA NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13		3300 (f)		Acres de la constante de		74,000	28,000				. NA	NA NA	· · · · NA	. NA	NA.	NA NA	NA,	NA.	NA
Toluene	520	12	200	1440	-			68,000	39,000			180	NA.	NA.	NA	NA.	NA	NA	NA.	NA	NA
Xylenes, Total	420	210		7= ·-				24,000	19,000			100	NA.	NA NA	NA:	NA.	NA NA	. NA	NA NA	NA NA	NA NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)				NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	420 (g)	.210 (c)		S-000				24,000 (g)	19,000 (g)			100 (g)	NA.	NA .	NA	NA NA	NA "	NA	NA	NA NA	NA.
DIOXINS AND FURANS (ng/kg)																					
Total TEQ						}							NA NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 16 of 21

# TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

Anthronome													1-1.5	<b>11-15</b>	- 1-1.5	1115	1-1.5	13.6		14.5
Sample Identification: Laboratory (Jernful)   PARGE							SCREENING C	RITERIA												
Sample Identification   EPA Region 9 PRGs									Risk-	Based Concer		Leaching to	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP
Cate Collection   Collection								Soil Ingestion,												
SEMINOLATILES (mg/kg)				Plants				Occupational			Occupational	Occupational								
EPA Nethodo SW8270			<u> </u>	1 / 181																
2.40	EPA Method SW8270																			
Acenaphthere							-													
Anthropere		29000		20	-		of the same of the	SERVICE OF THE PROPERTY OF THE	16,000				0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
Benzolaphracene				10 (b)	3900 (b)															
Benzeglipyere   C21   8								2.7		590										
Benzgight   Description   De		The second secon		NAMES COMM	125		CONTRACTOR OF THE PARTY OF THE	0.27	2.1			-								0.067 U
Beingilly fluid number   21   39				10 (b)					-		- Separated to military medical manages									
Burychin/Aphthalair   100,000   930   102(10)   4.5 (d)   1.5 (d	Benzo(k)fluoranthene.	21	49					27	210	5900	fige year, and		0.067 U	0.067 U	0.360	0.089	0.067 U	0.110	0.067 U	0 067 U
Carbacele				and the same of the same	The state of the s					All the Property of the Control of t										
Disented Name   Color   Colo								**				-							0.067 U	0.067 U
Disprophrame   1600					(4)						7.15	and the same of th								
Direct plot plot plot plot plot plot plot plo			2		0.002															
Display principals   E2,000   2300   200   30,000   0.45	Diethylphthalate	100,000			30,000 (e) 0.	.45 (e)							0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
District   Construction   Construc																				
Fluoranthene 22,000 4300 29,000 8900 0.078 0.140 J 1.100 0.250 J 0.067 U 0.310 J 0.067 U 0.067																				
Hexachionesthane 120 0.5	Fluoranthene				**						-	-				0.250 J		0.310 J	0.067 U	0.067 U
Interest   12   14						30														
Pentachiorophened 9 9 003 3 30 4 4 0.380 U 0.380 U 0.330 U 0		STATE OF THE PARTY OF THE PARTY.																		
Phenarthrene 190 (b) 84 (b)							The second beautiful		THE TRANSPORTED BY AND ADDRESS.											0.067 U
									TOTAL STREET, SOUTH STREET, SO	2		Anto-Articophysical Control								
	Pyrene	29,000	4200			Here		21,000	6700				0.110		1.200	0.260 J	0.067 U	0.450 J		0.067 U
SEMIVOLATILES (mg/kg)	CEMIVOLATILES (malka)																			
SEAN HOLANICE SWETTSMM																				
Acenaphthene 29,000 570 20 41,000 16,000 NA NA NA NA NA NA NA NA NA NA NA NA NA								41,000	16,000			WITH THE PARTY OF								NA NA
Aceragomytylene 190 (b) 84 (c) 10 (b) 3900 (b) 90,000 NA NA NA NA NA NA NA NA NA NA NA NA NA							The state of the s		90,000	***************************************	D. A. DHALLON C. LEW D									
Benzig g mtriacene   21 2 - 2.7 21 6500   MA NA NA NA NA NA NA NA NA NA NA NA NA NA	Benzo(a)anthracene				- P. B.															
Benzo(a)pyrene 0.21 8 125 0.27 2.1 59 NA NA NA NA NA NA NA NA NA NA NA NA NA								A Secretary and the second												NA NA
Benzo(g.h.)/benylene 190 (b) 84 (b) 19 (b) 3900 (b) NA NA NA NA NA NA NA NA NA				CANADA STANDARD		Annual Colored Colored Colored Colored				Daniel Control of Cont		1 H 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NA	NA	NA	NA	NA	NA	NA	NA
				m-mm-12/2004	200									Committee of the commit				\$41.55 July		140-4000Millionications
Chrysene 210 160 270 2100 59,000 NA NA NA NA NA NA NA NA NA NA NA NA NA					mer's with the common common or															
Fluoranthene 22,000 4300 29,000 8900 NA NA NA NA NA NA NA NA NA NA NA NA	Fluoranthene	22,000	4300		**			29,000	8900						NA		NA	NA		NA
Fluorette: 26,000 660						30										West of the second of the seco	DOLLARS BEING BON SHEET OF	SECOND PROPERTY OF THE PROPERT		
19				10	3900						7.15	15								
Phenanthrene 190 (b) 84 (b) NA NA NA NA NA NA NA NA NA NA	Phenanthrene			**				-												
Pyrepe 29,000 4200 - 21,000 6700 - NA NA NA NA NA NA NA NA NA NA NA NA NA	Pyrene	29 000	4200		25			21,000	6700				= NA	NA	NA.	NA	NA-	NA	# ≠NA	NA.
CHLORINATED PHENOLS (mg/kg)		<b>3</b> )	1				1			}		ľ								
Method 8040/8270SIM         9.0         0.03         3         30         -         4         -         -         -         -         NA		9.0	0.00	•	20	4			_			ļ	ΔIA	AIA	NA	NA	NΔ	NA	NA.	NA
1 CHARLEST CONTINUE TO 100 100 100 100 100 100 100 100 100 10	r emacritotophenor	Ð.U	0.03	3	30	7	"	-		-	-	-	NO	INO	INC.	1301	INO	II.A	1903	130

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# TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

													1:1.5	120.6	14.5	14.5	1:1.5	1-1.5	1-1,5	1915 - E
1							SCREENING C	DITEDIA												
							SCHEENING C	RIJERIA	Di-I-1	Based Concer			2011	COMP	COMP	COMP	COMP	COMP	COMP	COMP
									HISK-I	Based Concer		I constitution	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP
											Volatilization to	Leaching to				04444	0.5.4.4.5	047 (4.4.5)	048/445	01011110
Sample Identification:								Soil Ingestion,	Dermal Contact,		Outdoor Air	Groundwater	G6 (1-1.5)	G7 (1-1.5)	G10 (1-1.5)	G11 (1-1.5)	G15 (1-1.5)	G17 (1-1.5)	G18 (1-1.5)	G19 (1-1.5)
Laboratory Identification:	EPA Region 9			Oregon :			Background		Construction	Excavation			0108189-13	0108196-02	0108189-18	0108196-05	0108172-45	0108172-16	0108172-37	0108172-49
Date Collected:	Industrial D	AF=20	Plants	Mammals	Birds I	Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/24/2001	8/27/2001	8/24/2001	8/27/2001	8/22/2001	8/21/2001	8/22/2001	8/22/2001
VOLATILES (mg/kg)																				
EPA Method SW8260			ŀ									Ī								
1.2.4-Trimethylbenzene	170			3300 (f)	_			1500	1400	40,000	790	55	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
			The second of th		 第40 相		CONT. CONT. DOMESTIC CONT. CO.		0.25			0.000059	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001.0
1,2-Dibromoethane		報告 (権						0.033		7.1	1.7									
1,3,5-Trimethylbenzene	70	CONTRACTOR SECTION		3300 (f)		estimate to		1500	1400	40,000	Antonio de la branchista de la francia de la	12	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanene							*/		•				0.005 U		0 005 U	0,005 U	0.005 U	0,005 U		
4-Isopropyltoluene		12 (a)	200 (a)	1440 (a)									0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
Acetone	54,000	16		1250									0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005_U
Benzene	1.4	0.03		3300		-		34	340	9400	48	0.052	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon Disulfide	720	32											0.001 U	0,001 U	0.001 U	0.001 U	0.001 U	0.001-U	0.001 Ú	0.001 J
Ethylbenzene	400	13		3300 (f)				74,000	28,000				0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 ∪	0.001 U
Isopropylbenzene	NAMES AND ADDRESS OF THE OWNER.	13		3300 (f)	and the same of			51.000	24,000				0.001 U	0.001.U	0.001 U	0 002 U	0.001 U	0.001 U	0.001 U	0.001 U
m.p-Xylene		10 (g)		2207 (1)				24,000 (g)	19,000 (g)		**	-	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
		10 (g)						24,000 (g)	19,000 (g)				0.002 0		0.002 U	0.004 U			0.002 U	0.002 U
Methyl lodide					town town Char		<b>用。图《数</b> 记》		a man special representation											
Methyl tert-butyl ether	70					Secretary in	THE STREET OF THE STREET	760	9000		720	0.30	NA.	NA NA	NA	NA	NA	NA_	NA NA	NA
Naphthalene		84	10	3900				770	710	20,000	- 94	- 15	0.010 U	- 0.010 U	0.010 U	0.020 U	0.010 U	0.010 U		0.010 U
n-Butylbenzene	240			3300 (f)									0.002 U	0.002 U	0.002 U	0.004 U	0.002 U	0.002 U	0.002 U	0.002 U
n-Propylbenzene			-,4 10	3300 (f)				19,000	9300				0.001 U	0.001 U	0.001 ⊍=	0.002 U	= 0.001 U	- 0.001 U		0.001 U
o-Xylene	420 (g) 2	10 (g)	1					24,000 (g)	19,000 (g)			100 (g)	0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
sec Butylbenzene	220			3300 (t)								100	0.001 U	0.001 U	0.001 U	0.002 U	0.001_U	0.001 U	0.001 U	0.001 U
tert-Butylbenzene	390			3300 (f)					**				0.001 U	0.001 U	0.001 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
Toluene	520	12	200	1440			Self-self-self-self-self-self-self-self-s	66,000	_39,000			180	0.001 U	0.001 U	0.001 U	0.002 U	-0.001 Ü	0.001 U	0.001 U	0.001 U
212 200 200 200 200 200 200 200 200 200	1.07.17.2						- Commence - Colore Colore	AT THE RESIDENCE AND ADDRESS.					CONTRACTOR SERVICES	The same same same same same same same sam						**************************************
HYDROCARBONS (mg/kg)																				
m briodribone (mg/kg)						- 1				1										
NWTPH-HCID							]													
Gasoline						~		22,000	13,000		80,000	110	22.5 U	21.7 U	21.7 U	22.2 U	21.3 U	21.7 U	21.3 U	21.3 U
Kerosene		10.55	海域等										56.2 U	64.3 U	54.3 U	65.6 U	53:2 U	54.3 U	53.2 U	53.2 U
Diesel	**	acadiminative season	ANACOMISE MOST	destroyen manufacturer		30-001-007-002	rouncing respective	70,000	23,000	100-100-100-100-	Service deposits of the control of		56.2 U	54.3 U	54.3 U	55.6 U	53.2 U	54.3 U	53.2 U	53.2 U
Lube Oil		10.00											112-0			111 U		109 U	106 U	106 U
Cubo Cu	285 - 125 - 125	3960 E 550 E	Ber Silving	water the same		Control of the last		Annual Property law and	SEPTEMBER PROPERTY.	Christian Statement	bed Merch Chestermone			HALL BOX HANDS AND SHOULD			AND OF THE REAL PROPERTY.			
NWTPH-Dx (mg/kg)		T I					ľ													
TPH-Diesel Range						-		70,000	23,000				NA	NA	NA	NA	NA	NA	NA	NA
TPH-Kerosene Range							W 80 L	1000					NA -	NA-	NA NA	- NA	-NA	NA -	NA NA	NA -
TPH-Motor Oil Range									***			**	NA	NA	NA	NA	NA	NA	NA	NA
·							I			1										
NWTPH-G (mg/kg)						- 1	- 1			1										
TPH-Gasoline Range								22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA
-												i								
PRIORITY POLLUTANT		- 1					İ			- 1										
METALS (mg/kg)		- 1																		
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i) 6	60 (i)	5 (j)			**		1	2.08	2.45	1.74	1.85	2.22	1.88	2.52	2.20
Chromium (6010)		38			4 (h)(k) 0.4		23.1						15.4	16.2	16.2	18.2	17.8	16.4	16.3	16.6
Copper (6010)	3-72-4	20	100	390		50	19.1	-			-	and the same of	12.7 J	13.1	15.9 J	16.0	13.6	16.3	13.9	16.7
												30			30.8J			7.38 J	200 U	
Lead (7421)	800		50	4000		500	9	750	750	750	363	80	8.72 J	2,23		2,98	2,19			2.63
Nickel (6010)		130	30	625		200	21.4						17.1	19.5	17.3	20.7	20.2	18.2	19.4	17.9
Zinc (6010)	100.000 - 12	2,000	50 (h)	20,000	60 (h)	200:	60.2						138	49.7	57.9	56.4	48,9	334	68.2	50,8
		1				- 1	ļ			I		1								
Cadmium (6010)	450	8	4	125		20							NA	NA	NA	NA	NA	NA	NA	NA
Moreury (7471)	910		0.3	73	1.5	0.1							- NA	NA NA	NA	NA.	NA NA	NA	NA NA	NA A
												ĺ								
•												•								

Page 18 of 21

# TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

													1-1.5	1-1.5	71-15	1-1,5	1-1,5	1-1,5	A 5 11-165 (m)	1-1.5
ſ							SCREENING C	RITERIA												
ľ			T T						Risk-	Based Concen	trations		COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP
							i				Volatilization to									
Sample Identification:			1					Soil Ingestion, I			Outdoor Air	Groundwater	G6 (1-1.5)	G7 (1-1.5)	G10 (1-1.5)	G11 (1-1.5)	G15 (1-1.5)	G17 (1-1.5)	G18 (1-1.5)	G19 (1-1.5)
Laboratory Identification:		on 9 PRGs		Oregon			Background		Construction				0108189-13	0108196-02	0108189-18	0108196-05	0108172-45	0108172-16	0108172-37	0108172-49
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/24/2001	8/27/2001	8/24/2001	8/27/2001	8/22/2001	8/21/2001	8/22/2001	8/22/2001
BETX (mg/kg)																				
EPA Method SW8021B													i							
Benzene	1.4	0.03	-	3300				34	340	9400	48	0.052	NA.	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13		3300 (f)		170		74,000	- 28,000				NA.	NA	NA NA	in NA .	NA NA	NA NA	NA.	NA NA
Toluene	520	12	200	1440				68,000	39,000			180	NA NA	NA.	NA	NA	NA	NA	NA	NA NA
	420	210			1600			24,000	19,000			100	NA.	NA =	- NA	- NA	NA NA	NA NA	NA.	NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)	**	**		NA.	NA	NA	NA NA	NA	NA	NA	NA.
o-Xylene	420 (g)	210 (g)	12000		945			24,000 (g)	19,000 (g)	10 E		100 (g)	NA.	NA NA	NA .	AIA	NA.	NA .	NA NA	. : NA
DIOXINS AND FURANS (ng/kg)			l							Į.		Į.								
Total TEQ									**				N/A	NA	NA	NA	NA	NA	NA	NA

Page 19 of 21

# TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

												1-1,5	1 4-1.5 1 K	1-1.5	1-1.5	vi 445	1-1,5	1-1.5	1-1,5
						SCREENING C	RITERIA												
								Risk	Based Concer			COMP	COMP		COMP	COMP			
Sample Identification:	l		1			]	Soit Ingestion.	Dermal Contact	and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	BA7 (1-1.5)	BA8 (1-1.5)	BA9 (1-1.5)	BA10 (1-1.5)	BA11 (1-1.5)	G10-4 (1-1.5)	G10-5 (1-1.5)	G11-3 (1-1.5)
Laboratory Identification:	EPA Reg	jion 9 PRGs	Ī	Oregon S	SLVs	Background	Cox Ingconon,	Construction		Outdoor 7111	Groundwald	0108196-21	108196-17	0108182-24	0108196-13	0108196-09	0309196-28	0309196-45	0309196-31
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/27/2001	8/27/2001	8/23/2001	8/27/2001	8/27/2001	9/29/2003	9/29/2003	9/29/2003
SEMIVOLATILES (mg/kg) EPA Method SW8270																			
2.6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)								0.330 U	0.330 U	0.330 U	0.330 U	0.330 L	J NA	NA	NA
2 Methylhaphthalene	190 (b)	84 (b)	10 (b)	3900 (b)				<b>70</b>	OLEMBIA			0.067 U					NA .	NA NA	NA NA
Acenaphthene	29000	570	20				41,000	16,000			-	0.067 U		0.067 U			NA	NA	NA
Acenaphthylene Anthracene	190 (b) 100,000	84 (b) 12,000	10 (b)	3900 (b)			£,111 × 111	90,000				0.067 U 0.067 U		0.067 U 0.067 U		3.500 3.300	NA NA	NA NA	NA NA
Benzola)anthracene	29	12,000					27	21	590			0.067 U		0.067 U			NA.	NA -	NA S
Benzo(a)pyrene	0.21	8		125	*		0.27	2.1	59			0.067 U		0.067 U		34.000 J	NA	NA	NA
Benzo(b)fluoranthene	2.1	5								ridi		0.067 U		0.079	0,160	62.000	NA.	-NA	NA:
Benzo(g,h,i)perylene Benzo(k)fluoranthene	190 (b)	84 (b)	10 (b)	3900 (b)				210	5900		- 5 10 - 25 31	0.067 U		0.067 U 0.067 U		24.000 J 19.000	NA NA	NA NA	NA NA
bis(2-Ethylhexyl)phthalate	21 120	49 3600 (c)		1020	4.5		- 2/	210	5900			0,067 U						NA NA	NA NA
Butylbenzy/phthalate	100,000	930		1020 (d)								0.067.U						NA.	NA.
Carbazole	86	0.6							-		-	0.067 U	0.067 U	0.067 U			NA	NA	NA
Chrysene	210	160					270	2100	59,000			0.967 U				26.000 J			
Dibenz(a,h)anthracene	0.21	2		0.002			0.27	2.1	59	-	-	0.067 U 0.067 U			0.067 U 0.067 U	0.470 J 0.090 J	NA NA	NA NA	NA NA
Dipenzoruran Diethyiphthalate	1600	3600 (c)	200 (e)		0.45 (e)				-			0.067 U		0.067 U	0.067 U	0.067 L		NA	NA
Dimethylphthalate	100,000	3600 (c)	200 (e)		0.45 (e)							0.067 U						NA.	
Di-n-Butylphthalate	62,000	2300	200	30,000	0.45							0.067 U		0.067 U	0.067 U	0.067 U		NA	NA
Di-n-Octyl phthalate	25,000	10,000	200 (e)	30,000 (e)	0.45 (e)		a an ac					0.067 U				0.067 U		NA.	NA .
Fluoranthene Pluorene	22,000 26,000	4300 -560			- 30	-	29,000 95,000	8900 12,000				0.067 U 0.067 U		0.067 U 0.067 U	0.130 J 0.067 U	55.000 J 0.830 J	NA NA	NA NA	NA NA
Pluotene Hexachloroethane	120	0.5		_					SHOWN IN NO	-		0.130 U	0.130 U	0.130 U	0.130 U	0.130 U		NA NA	NA NA
Indeno(1,2,3-cd)pyrene	2.1	14					2.7	21	590			0.067 U		0.067 U		18.000	NA NA	NA.	NA .
Naphthalene	190	84	10	3900			770	710	20,000		15	0.130 U		0.130 U	0.130 U	0.430	NA	NA_	NA
Pentachlorephenol	9.0	0.03	3	30	41	6.8256.9						0.330 U 0.067 U	0.830 U 0.450	0.330 U 0.067 U	0.330 U 0.067 U	0,330 U 29,000	NA NA	NA NA	NA = NA
Phenanthrene Pyrene	190 (b) 29:000	84 (b) 4200				-	21,000	6700				0.067 U		0.067 0	0.150 J			NA NA	NA NA
w tere	23,000	4200		:	No. 10									0.00		A SAN AND A		and an account of the se	CONTRACTOR SEC
SEMIVOLATILES (mg/kg)																			
EPA Method SW8270SIM	22.222	F70					44.000	16.000				NA	NA	NA	NA	NA	0.01	0.00667 U	0.00667 U
Acenaphthene Acenaphthylene	29,000 190 (6)	570 84 (b)	20	39(W) (M)		-	41,000	10,000					NA .	NA NA		NA NA	0.0673	0.00933	
Anthracene	100,000	12,000	10.105					90,000				NA	NA	NA	NA	NA	0.078	0.00667 U	0.00667 U
Benzo(a)anthracene	2.1	2-					2.7	21	590			NA	NA	NA-	NA.	NA NA	0.481	0.028	0.00667 U
Benzo(a)pyrene	0.21	8	-	125		COLUMN TOWN THE PROPERTY.	0.27	2.1	59			NA NA	NA NA	NA NA	NA	NA	0.936	0.066	0.01
Senzo(b)fluoranthene Benzo(g,h,i)perylene	<b>2.1</b> 190 (b)	5 84 (b)	10 (b)	3900 (b)								NA NA	NA NA	NA NA	NA NA	NA NA	0.386	0.062 0.0753	0.012 0.0113
Benzo(g,n,l)perylane Benzo(k)fluoranthene	190 (b)	84 (D) 49	(a) UI	3900 (b)			27	210	5900			NA NA	NA NA	NA NA	NA NA	NA.		0.0213	0.00667 U
Chrysene	210	160					270	2100	59,000		***************************************	NA	NA	NA	NA	NA	0.561	0.032	0.00667 U
Dibenz(a,h)anthracene	0.21	2					0.27	2.1	59			- NA	NA.	NA	NA .	NA	0.0773		0.00667 U
Fluoranthene	22,000	4300	100 BEN 100				29,000 35,000	8900				NA NA	NA NA	NA NA	NA NA	NA NA	1.36 0:0193	0.0527 0.00667 U	0.0113 0.00667_U
Fluorene Indeno(1,2,3-cd)pyrene	26,000 2.1	560 14			30	- <b>1</b>	35,000 2,7	12.000 21	590			NA NA	NA NA	NA NA	NA NA	NA NA	0.0193	0.0507	0.008
Naphthalene	190.	14 84	10	3900		-	770.	710	20,000		116	NA.	NA NA	NA NA	NA NA	NA .	0.016	0,00667 U	0,00667 U
Phenanthrene	190 (b)	84 (b)						**		-	-	NA	NA	NA	NA.	NA	0.547	0.0133	0.00667 U
Pyrene	29,000	4200			100 100 100 100 100 100 100 100 100 100		21,000	6700				NA	NA NA	NA .	NA.	NA.	2.08	0.0753	0.0153
CHLORINATED PHENOLS (mg/kg	7)		1		Į.				}		}								
Method 8040/8270SIM	37		İ		1	l													
Pentachlorophenol	9.0	0.03	3	30	4							NA	NA	NA	NA	NA	NA	NA	NA
1			1		ı	ļ			I		,								ŀ

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Page 20 of 21

# BZTO104(e)023460

# TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

													1-1.5	1-1.5	171,5	1.1.5	1115	1.1.5	14.5
I						SCREENING C	CRITERIA												
								Risk-	Based Concer			COMP	COMP		COMP	COMP			
							L			Volatilization to	Leaching to								
Sample Identification: Laboratory Identification:	EPA Region 9 PF			Oregon	CI Vo	Background	Soil Ingestion, [	Dermal Contact Construction	, and Inhalation Excevation	Outdoor Air	Groundwater	BA7 (1-1.5)	BA8 (1-1.5)	BA9 (1-1.5)	BA10 (1-1.5)	BA11 (1-1.5)	G10-4 (1-1.5)	G10-5 (1-1.5)	G11-3 (1-1.5) 0309196-31
Date Collected:			Plants	Mammals	Birds Inverts	Background	Occupational	Worker	Worker	Occupational	Occupational	0108196-21 8/27/2001	108196-17 8/27/2001	0108182-24 8/23/2001	0108196-13 8/27/2001	0108196-09 8/27/2001	0309196-28 9/29/2003	0309196-45 9/29/2003	9/29/2003
	madotiai Dit		Tierno	HILMITICIO	Dirdo Interio	<del></del>	Оссаранотна	7.01101	1101101	Соосранопа	Cocapationa	GENESOT	GETTEOUT	GEGEGOT	GENZOOT	GETTEOUT	0/20/2000	0/20/2000	0/20/2000
VOLATILES (mg/kg) EPA Method SW8260						1													
1,2,4-Trimethylbenzene	170 -			3300 (f)		_	1500	1400	40,000	790	55	0.001 U	0.001 U	0.001 U	0.001 L	0.002 U	NA	NA	NA NA
1,2 Dibromoethane							0.038	0.25	71	1.7	0.000059	0.001 U	0.001 U					NA.	NA.
1,3,5-Trimethy/benzene	70 -	E944.18-9-1115.0	 57-28-00-01-12-29-80-01	3300 (f)			1500	1400	40,000		12	0.001 U	0.001 U		0.001 L		NA	NA	NA
2-Butanone	110,000											0.005.U	0.005 U		0.005 L	0.005 U	, NA	NA NA	NA-
4-isopropyltoluene	520 (a) 12		200 (a)	1440 (a)						0		0.001 U	0.001 U	0.001 U	0.001 U		NA	NA	NA.
Acelone	54,000 1		-				Marie III					0.005 U	0.005 U					NA	NA.
Benzene Carbon Disulfide	1.4 0.6 720 <b>3</b>	)3 2		3300			34	340	9400	48	0.052	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U		NA NA	NA NA	NA NA
Ethylbenzene	400 <b>1</b>		-	3300 (f)			74,000	28,000			-	0.001 U	0.001 U	0.001 U	0.001 U		NA NA	NA NA	NA NA
Isopropylbenzene	2000			3300 (f)			51,000	24,000				0.001 U						NA NA	NA NA
m,p-Xylene	420 (g) 210	(g)					24,000 (g)	19,000 (g)				0.002 U	0.002 U	0.002 U	0.002 U		NA	NA	NA
Methyl lodide												0.001 U	0.001 U					. NA	NA :-
Methyl tert-butyl ether	70					<u></u>	760	9000		720	0.30	NA	NA.	NA	NA	NA	NA	NA NA	NA
Naphthalene 4			10	3900			770	710	20,000		:15	0.010 U	0.010 U	0.010 U				NA.	NA NA
n-Butylbenzene n-Propylbenzene	240	- 1		3300 (f)			19.000	-9390				0.002 U 0.001 U	0.002 U 0.001 U	0.002 U 0.001 U	0.002 U 0.001 U		NA NA	NA NA	NA NA
o-Xylene	420 (g) 210		1	SOLD (I)			24.000 (a)	19.000 (g)			100 (g)	0.001 U	0.001 U	0.001 U	0.001 U		NA.	NA NA	NA NA
sec-Bulytbenzene		(9)		3300 (f)			24,000 (g)	19,000 (g)			100 (g)	0.001 U	0.007.0	0.001 U				NA NA	NA NA
tert-Butylbenzene	390		-	3300 (f)		-						0.001 U	0.001 U	0.001 U	0.001 U		NA	NA.	NA
Toluene	520 1		200	1440			68,000	39,000			180	0.001 U	0.001 U	- 0.001 U	0.001 U	0.002 ∪	NA .	NA.	NA .
HYDROCARBONS (mg/kg)																			
NWTPH-HCID																			
Gasoline							22,000	13,000		80,000	110	22.5 U	22.0 U	22.0 U	22.0 U		NA	NA	NA
Keresene												56.2 U	54.9 U					r'= NA	NA .
Diesel		42 A COLUMN TO					70,000	23,000				56.2 U	54.9 U	54.9 U	54.9 U 110 U	Diesel	NA	NA	NA
Lube Oil							F1-12-11					112 U	110 U	110 0	110 U	Lube Oil	NA	NA:	NA,
NWTPH-Dx (mg/kg)																			
TPH-Diesel Range	emusers with view harm under subst	Large Nave - New	ده دادنده سیانهاندست	era Signo-mongati to piningstilija t	AND DESCRIPTION OF THE SEC.	SERVICE TO THE RESERVE THE PROPERTY OF THE PERSON OF THE P	70,000	23,000		- Andreas - Andr	er register og det skiller i Menses e	NA	NA	NA	NA.	574	NA	NA	NA
TPH-Kerosene Range TPH-Motor Oil Range			- av					a de tra				NA NA	, NA	NA NA	NA NA	NA 1120	NA NA	NA NA	NA NA
IPH-Motor Oil Hange										*-		NA	NA	NA	NA	1120	NA	NA	NA
NWTPH-G (mg/kg)		- 1							i										ļ
TPH-Gasoline Range		l		**			22,000	13,000		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT										1									
METALS (mg/kg)		- 1							1										i
Arsenic (7060)	1.6 (h) 29		10 (i)	29 (i)	10 (i) 60 (i)	5 (j)						3.05	2.54	2.07	2.60	3.59	NA	NA	NA
Chromium (6010)	450 36				4 (h)(k) 0 4 (h)(k)		4 4 4					20	16.5	18.7	20.6	17.9	NA NA	NA NA	NA
Copper (6010)	41,000		100	390	190 50	19.1	CONTRACTOR DATE OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OW					12,7	14.0	13.4	14.6	20.3	NA	NA	NA
Lead (7421)	800 -		50	4000	16 500	9	750	750	750		30	1,92 U	3.10	2.04	9.31 J	35,2	- NA	NA.	1.67 U
Nickel (6010)	20,000 13		30	625	320 200	21.4						19.9	18.6	17.4	19.2	19.5	NA NA	NA	NA Fox
Zinc (6010)	100,000 12.0	au .	50 (h)	20,000	60 (h) 200	60.2		-			less "Alle	49.9	63,0	49,3	82,7	87.9		NA	52.1
Cadmium (6010)	450 8	- 1	4	125	6 20				_		1	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)	310		0.3		1,5 0,1				27.7			NA NA	NA NA	NA NA	NA.	NA NA	NA	NA II	
63 January 19 January									Commonwealth	mr remone were								- Marie - Cloth - Apr - Types C 2 2 2 2 2	

Page 21 of 21

## TABLE C-4a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (0-3 FT) PHASE III RI

													1-1.5	1415	1-1.5	1-1.5	. 1-1.6	11.5	# 151, <b>5</b>	1415
1					,	s	CREENING C	RITERIA												
									Risk-	Based Concer	trations		COMP	COMP		COMP	COMP			
											Volatilization to	Leaching to	1							
Sample Identification:								Soil Ingestion, D			Outdoor Air	Groundwater	BA7 (1-1.5)	BA8 (1-1.5)	BA9 (1-1.5)	BA10 (1-1.5)	BA11 (1-1.5)	G10-4 (1-1.5)	G10-5 (1-1.5)	G11-3 (1-1.5)
Laboratory Identification:	EPA Regio			Oregon			Background		Construction	Excavation			0108196-21	108196-17	0108182-24	0108196-13	0108196-09	0309196-28	0309196-45	0309196-31
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	inverts		Occupational	Warker	Worker	Occupational	Occupational	8/27/2001	8/27/2001	8/23/2001	8/27/2001	8/27/2001	9/29/2003	9/29/2003	9/29/2003
BETX (mg/kg)																				
EPA Method SW8021B													İ							
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	400	13		3300 (t)	16 多 第		<b>建设度</b>	74,000	28,000				NA	NA NA	NA.	NA.	NA.	NA NA	- NA	NA :
Toluene	520	12	200	1440				68,000	39,000			180	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	420	210 **		# (F-6)			10 Arr 30 Arr	24,000	19,000	1.		100	NA.	NA .	NA NA	, NA	NA:	NA NA	NA.	NA NA
m,p-Xylene o-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)				NA	NA	NA	NA.	NA	NA NA	NA NA	NA NA
o Xylene:	420 (g)	210 (g)						24,000 (g)	19,000 (g)			1.00 (g)	NA.	NA	NA	NA 1	NA	NA NA	NA.	NA:
						ŀ														l l
DIOXINS AND FURANS (ng/kg)																				
Total TEQ			-						**				NA NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-4b
SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL:
EASTERN PORTION OF PHASE III STUDY AREA (>3 FT)

Page 1 of 6

PHASE III RI

						5-5.5	I CF	CF	CE LINE	LILECT .	CF	· CF	CF	CF	E. C. C.	Control of	. A SECTION OF THE SE	THE STATE OF STATE OF
			SCREENING CRITERIA								••							
•		T		ed Concentration:	s	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP		COMP
		]	Soil Ingestion, Dermal	Volatilization to	Leaching to	1												
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	BA11 (5-5.5)	G6 (8.5-11.5)	G7 (6.5-7.5)	G10 (10.5-12)	G11 (5.5-6.5)	G15 (8-13)	G17 (13-15)	G18 (12-15)	G19 (9-11)	BA7 (10.5-11.5)	BA8 (9-13)	BA9 (13.5-14.5)	BA10 (5.5-7.5)
Laboratory Identification:	PRGs	Background	Excavation			0108196-10	0108189-15	0108196-03	0108189-20	0108196-06	0108172-47	0108172-18	0108172-39	0108172-51	0108196-23	108196-19	0108182-26	0108196-14
Date Collected:	DAF=20	1	Worker	Occupational	Occupational	8/27/2001	8/24/2001	8/27/2001	8/24/2001	8/27/2001	8/22/2001	8/21/2001	8/22/2001	8/22/2001	8/27/2001	8/27/2001	8/23/2001	8/27/2001
SEMIVOLATILES (mg/kg)		1																
EPA Method SW8270			Ì	Ī	1													
2,6-Dinitrotoluene	0.0007			-	-	0.330 UJ	0.330 U	0.330 U	0.330 (	0.330 U	0.330 (	0.410	0.330 L	J 0.330 L	J 0.330 L	J 0.330 U	0.330 U	0.330 U
2-Methylnaphthalene	84 (b)					0.067 UJ	0.067 U	= 0.067 U	0.067 U	J 0 067 U	- 0.067 t	J 0.067 U	0.067 L	0 067 L	0.067 U	J 0.067 U	0.067 U	0.067 U
Acenaphthene	570				*-	0.350 J	0.067 U	0.067 U	0.067 L	J 0.067 U	0.067 L	J 0.067 U	0.067 L	0.067 L	J 0.067 U	J 0.067 U	0.067 U	0.067 U
Acenaphthylene	84 (b)					0.170 J	0.067 U	0.067 U	0.067 L	J 0.067 U	0.067 L			0.067 (	0.067 t	J 0.067 U	0.067 U	9.067 U
Anthracene	12,000					0.270 J	0.067 U	0.067 U	0.067 L		0.067 L				0.067 U	J 0.067 U	0.067 U	0.067 U
Benzo(a)anthracene	2		590		27 11 21 21	1.500 J	0.067 U				0.087 (							0 067 U
Benzo(a)pyrene	8		59			2.000 J	0.067 U	0.067 U	0.067 L		0.067 (	J 0.067 U	0.067 U			J 0.110 J	0.067 U	0.067 U
Benze(b)fluoranthene	- 5					2,100 J=	0.067 U		0.067. L		0.082						0,067 U	
Benzo(g,h,i)perylene	84 (b)		This can be desired by the second began to the second			1.700 J	0.067 U	0.067 U	0.067 L		0.067 U							0.067 U
Benzo(k)fluoranthene	49	4.6	5900		A LABOR	0,660 J	0 067 ∪	0.067 U			0.067.1							
bis(2-Ethylhexyt)phthalate	3600 (c)	down Committee (Committee Committee	entrephilit remini Turus Salah		and the same of th	0.067 UJ	0.067 U	0.067 U	0.067 L		0.067 L							0.067 U
Butyfbenzylphtharate	930					0,067 ∪₄	0.067 U	0.067 U	0.067 L		0.067 (			0.067 U				
Carbazole	0.6		-	•-		0.067 UJ	0.067 U	0.067 U	0.067 L		0.067 L						0.067 U	0.067 U
Chrysene	160		59,000			1.600 J	0.067 U	0.067 ∪	0.067 L		0.067 (							
Dibenz(a,h)anthracene	2		59			0.100 J	0.067 U	0.067 U	0.067 L		0.067 L						0.067 ∪	0.067 U
D benzofuran						C:067 UJ	0.067 U	0.067 U	0.067 L		0.067 t							
Diethylphthalate	3600 (c)					0.067 UJ	0.067 U	0.067 U	0.067 U		0.067 L						0.067 U	0.067 U
Dimethylphthalate	3600 (c)					0.067 UJ	0.067 U	0.067 U	0.067 U		0.067 (							
Di-n-Butylphthalate	2300			PRESCRIPTION CONTRACTOR	 	0.067 UJ	0.067 U	0.085	0.067 U		0.067 L						0.067 U	0.067 U
Di-n-Octyl phthalate	10,000					0.067 UJ	0.067 U		0.067 ∪		0.067 L							
Fluoranthene Fluorene	4300					4.700 J	0.067 U	0.076 J	0.067 U		0.093 J						0.079 0.067-U	0.067 U
	560				AND DESCRIPTIONS OF THE PERSON NAMED IN	0.074 ) 0.130 UJ	0.087 U	0.067 U 0.130 U	0.067 U 0.130 U		0.067 C 0.130 L		0.130 U			Section 1997	0.130 U	Mark Committee of the C
Hexachloroethane	0.5		590			1,300 J	0.130 U	0.130 U			0.130 C		0.067 U			0.130 U 0.067 U		0.130 U
Indenc(1,2,3-cd)pyrene Nachthalene	1 <b>4</b> 84		20,000		15	0.130 UJ	0.067 U	0.067 U	0.067 U		0.067 L		0.067 U				0.067 U 0.130 U	0.067.U 0.130 U
Pentachio ophenol	0.03		THE RESERVE AND PROPERTY AND PERSONS ASSESSMENT AND PARTY.		COLUMN TO SERVICE STREET, SPECIAL PROPERTY AND ADDRESS OF THE PARTY AND	0.130 U	0.330 U	0.067 U	0.087 U		0.067 L		0.067 U					
Phenanthrene	84 (b)			-		2.100 J	0.067 U	0.067 U	0.067 U		0.067 L		0.067 U				0.067 U	0.350-U
Pyrene	4200						0.067 U											0.067 U
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM								2,000		•••••						<u> </u>		0,007
Acenaphthene	570					NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	84 (b)					NA		NA NA	/ NA	NA:	NA NA	NA =	NA	. NA	NA NA	NA:	NA.	NA.
Anthracene	12,000	ware-managed-managed-pro-				NA NA	NA NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA_	NA NA	NA
Benzo(a)anthracene	2		590		29	NA	NA =	NA	NA NA	NA NA	NA.	NA	NA NA	NA	NA.	NA NA	NA :	NA.
Benzo(a)pyrene	8		59			NA .	NA NA	NA	NA	NA	NA	NA	NA	NANA	NA NA	NA	NA	NA
Benzo(b)fluoranthene	5					NA NA	NA NA	NA	NA NA	NA NA	NA -	NA-	NA =	NA NA	NA NA		NA	
Benzo(g,h,i)perylene	84 (b)			control of the second of the s	- Maria - Mari	NA	NA	NA.	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	49		5900		10 94 0	NA	NA NA	NA	, NA	NA .	NA.	NA .		NA .	NA NA	. NA	NA NA	NA.
Chrysene	160	**	59,000			NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA NA	NA	NA
Dibenz(a,h)anthracene	2	200	59			NA NA	NA	NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA .	NA NA	NA NA
Fluoranthene	4300					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	560					NA	NA NA	. NA	NA .	NA NA	. NA	NA	NA			NA NA	NA.	
Indeno(1,2,3-cd)pyrene	14		590			NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Naphthalene "	84		20,000	1000	15	NA	NA	NA.	NA NA	NA	NA NA	NA	NA.		NA.	. NA	NA .	
Phenanthrene	84 (b)					NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Pyrene	4200					NA	NA.	. NA	NA.	NA .	NA.	NA	NA	NA .	NA.	NA.	NA NA	NA
CHLORINATED PHENOLS (mg/kg) Method 8040/8270SIM	´																	
Pentachiorophenol	0.03	65	we i	~-		NA I	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA.	NA	NA	NA

7/19/05 \(\Edmidata\)wprod/231\(\text{0.09\}\)132\(\text{Phill}\) | Fil | 0718\(\text{0.05\}\)132\(\text{Phill}\) | Fil | 0718\(\text{0.05\}\)132\(\text{Phill}\) | Fil | 0718\(\text{0.05\}\)132\(\text{0.

TABLE C-4b MMARY OF DETECTED ANALYTICAL RESULTS IN SOIL:

Page 2 of 6

## SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (>3 FT) PHASE III RI

						5-5.5	CF 42	OF STATE		CF.	C. CF.	GF S	CF	CF.		CF	1 0 - CF 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CF
			SCREENING CRITERIA												····			
			Risk-Base	ed Concentrations	<b>;</b>	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP		COMP
			Soil Ingestion, Dermal	Volatilization to	Leaching to													
Sample Identification:		1	Contact, and Inhalation	Outdoor Air	Groundwater	BA11 (5-5.5)	G6 (8.5-11.5)	G7 (6.5-7.5)	G10 (10.5-12)	G11 (5.5-6.5)	G15 (8-13)	G17 (13-15)	G18 (12-15)	G19 (9-11)	BA7 (10.5-11.5)	BA8 (9-13)	BA9 (13.5-14.5)	BA10 (5.5-7.5)
Laboratory identification: Date Collected:	PRGs DAF=20	Background	Excavation Worker	Occupational	Occupational	0108196-10 8/27/2001	0108189-15 8/24/2001	0108196-03 8/27/2001	0108189-20 8/24/2001	0108196-06 8/27/2001	0108172-47 8/22/2001	0108172-18 8/21/2001	0108172-39 8/22/2001	0108172-51 8/22/2001	0108196-23 8/27/2001	108196-19 8/27/2001	0108182-26 8/23/2001	0108196-14 8/27/2001
	DAF=20	1	yvoikei	Occupational	Occupational	0/2//2001	0/24/2001	0/2//2001	6/24/2001	0/2//2001	0/22/2001	6/21/2001	0/22/2001	6/22/2001	0/2//2001	6/2//2001	6/23/2007	6/2//2001
VOLATILES (mg/kg)																		
EPA Method SW8260 1,2,4-Trimethylbenzene			40,000	790	55	NA.	0.001 U	0.001 U	0.001 L	0.001 L	0.001 (	J 0.001 U	0.001 U	J 0.001 U	0.001 U	0.001 U	0.001 U	0.002 U
1,2-Dibromoethane			40,000 7.1	1.7	0.000059	NA NA	0.001 U		0.001 U									0.002 U
1,3,5-Trimethylbenzene	- Hill will be a party for second		40,000		12	NA NA	0.001 ∪	0.001 U	0.001 U								0.001 U	0.002 U
2-Butanone		COLUMN DE LA COLUMN				NA NA	0.0349	0.005 U	0.00542									0.010.0
4-Isopropyltoluene	12 (a)					NA	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U			0.001 U	0.002 U
Acetone	16				nie 1944 mig	. NA 2	0.177	0.005 U	0.0275	0.005 U			0.00643	0.005 U			0.00913	0.0191
Benzene	0.03		9400	48	0.052	NA.	0.001 U	0.001 U	0.001 U				0.001 U				0.001 U	0.002 U
Carbon Disulfide	32				Little A.	NA NA	0.001 U	= 0,001 U	0.001 U									
Ethylbenzene	13					NA NA	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U			0.001 U	0.001 U	0.002 U
Isopropylbenzene m.p-Xylene	210 (g)					NA NA	0.001 U 0.002 U	0,001 U 0,002 U	0.001 U 0.002 U				0.001 U 0.002 U		0.001 U 0.002 U		0.001 U 0.002 U	
	210 (g)					NA NA	0.002 0	0.002 U	0.002 U									0.004 U 0.002 U
Methyl lodide — Methyl tert-butyl ether				720	0.30	NA NA	NA NA	NA	NA NA	NA	NA	NA NA	NA	NA NA	NA NA	NA	NA	NA
Naphthalene	84		20,000	DECEMBER OF THE PERSON NAMED IN	15	NA .	0.010 U	0.010 U	0.010 U	0.010 U			0.010 U					0.020 U
n-Butylbenzene	##C 2869 - 10 - C 10 10 10 10 10 10 10 10 10 10 10 10 10					NA	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U		0.002 U	0.002 U	0.002 U	0.004 U
n-Propylbenzene						NA NA	0.001 U	0.001 U	0.001 U	0.001 U	0,001 (	l / 0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U
c-Xylene	210 (g)	-	-		100 (g)	NA	0.001 U	0.001 U	0.001 U	0.001 U	0.001 L		0.001 U		0.001 U	0.001 U	0.001 U	0.002 U
sec-Butylbenzene						NA NA	0.001 U	0.001 U	0.001 U				0.001 U					
tert-Buty/benzene				This selection of the s	visition (Result Inside Location	NA	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U		0.001 U	0.001 U	0.001 U	0.002 U
Toluene	12				180	NA NA	0.001 U	0:001 U	U 100,0	0.001 U	0.001 L	0,001 U	0.001 U	0,001 U	0,001 Ü	0.001 U	0.001 U	0.002 U
HYDROCARBONS (mg/kg)																		
NWTPH-HCID																		
Gasoline	THE RESIDENCE PROPERTY AND ADDRESS OF THE PARTY.			80,000	110	23.3 UJ	26.7 U	25.0 U	26.3 U	26.0 U			26.0 U	23.0 U	23.5 U	23.8 U	22.7 U	22.2 U
Kerosene						58.1 UJ	66.7 U	62.5 U	65.8 U	64.9 U					58.8 U	59.5 U		
Diesel						58.1 UJ	66.7 U	62.5 U	65.8 U	64.9 U			64.9 U	57.5 U	58.8 U	59.5 U	56.8 U	55.6 U
Lube Oil		10.00				116 UJ	133 U	125 U	132 U	130 U	128-L	118 U	130 G	115 U	118 U	119 U	114 U	111 U
NWTPH-Dx (mg/kg)						*												
TPH-Diesel Range						NA	NA.	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-Kerosene Bange						NA NA	NA NA	NA	. NA	NA :	NA.		NA:	NA NA	NA.	NA NA	N/A	NA
TPH-Motor Oil Range			un.		**	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)																		
TPH-Gasoline Range				80,000	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																		
METALS (mg/kg)																		
Arsenic (7060)	29	5 (i)				NA	4.13 J	2.09	2.42	2.85	3.46	2.79	2.15	2,39	1.92	2.02	3.69	2.51
Chromium (6010)	38	23.1				NA NA	22.8	16.0	-20.1	18.2	17.9	14.1	17.8	16.3	17,0	17.4	16.6	18.1
Copper (6010)	-	19.1				NA	17.7 J	13.7	17.3 J	15.4	20.3	13.2	15.9	15.2	15.2	15.1	13.9	18.0
Lead (7421)		9	750		30 "	NA	1.81_J	2.49	3.79 J	2.71	8,13	1,69 U	1.85	1,69 ∪	1.65 U	2.85	1.92.U	11.1
Nickel (6010)	130	21.4	**	-	-	NA	18.8	17.7	19.4	17.9	16.6	16.1	16.7	18.2	18.4	18.2	18.4	18.9
Zinc (6010)	12,000	60.2	'e '' '' <b>.</b> ''   2   2   2			NA	43.1	52.4	53.2	55.7	66.8	444	45.9	46.3	47.4	50.9	46.5	59.4
	_			- 1														
Cadmium (6010)	8					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA NA
Mercury (747.1)		10 10 <del>1</del> 0 10 10	•		海塘區	NA NA	NA NA	NA	NA NA	NA.	. NA	NA.	NA.	NA .	NA NA	NA NA	NA	NA.
ı			I	ŀ	ı													

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# TABLE C-4b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (>3 FT) PHASE III RI

						5-5.5	CF	100 (CF) 2.5:	<b>GF</b> (300)	- W ( <b>CF</b> - W )	CF	OF SCHOOL	CF.	- CCET WIL	CF.	OF-	CF.	CF
			SCREENING CRITERIA					•										
				ed Concentrations		COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP	COMP		COMP
			Soil Ingestion, Dermal	Volatilization to		1												
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater		G6 (8.5-11.5)	G7 (6.5-7.5)	G10 (10.5-12)	G11 (5.5-6.5)	G15 (8-13)	G17 (13-15)	G18 (12-15)	G19 (9-11)	BA7 (10.5-11.5)	BA8 (9-13)	BA9 (13.5-14.5)	BA10 (5.5-7.5)
Laboratory Identification:	PRGs	Background	Excavation			0108196-10	0108189-15	0108196-03	0108189-20	0108196-06	0108172-47	0108172-18	0108172-39	0108172-51	0108196-23	108196-19	0108182-26	0108196-14
Date Collected:	DAF=20		Worker	Occupational	Occupational	8/27/2001	8/24/2001	8/27/2001	8/24/2001	8/27/2001	8/22/2001	8/21/2001	8/22/2001	8/22/2001	8/27/2001	8/27/2001	8/23/2001	8/27/2001
BETX (mg/kg) EPA Method SW8021B																		
Benzene	0.00						l											
Ethylberizene	0.03		9400	48	0.052	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
	13					NA.	I NAT	NA-	NA NA	e en Au	NA.	NA.	- NA			NA NA	. NA	NA
Toluene	12	where the letters in the support of the		**	180	NA NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA
Xylenes, Tutal	210				100	NA NA	NA	NA NA	NA NA	NA.	NA	NA .	- NA	. NA	NA NA	NA		NA.
m,p-Xylene	210 (g)					NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA
o-Xylene	210 (g)	三五名-副章			100 (g)	NA NA	NA.	NA NA	- NA	NA NA	NA NA	NA NA	NA	- NA	NA NA	NA NA	NA NA	NA
DIOXINS AND FURANS (ng/kg) Total TEQ					-	NA.	NA NA	NA	NA	NA	NA	A) A	NA.	NA	NA	NA	NA	NIA
TOTAL TEC				1 "		I INA	1 13/3	130	13/3	13/3	130	1975	INA	INM	INA	INA	INA	INA

Page 3 of 6

TABLE C-4b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (>3 FT) PHASE III RI

						CF	CF OF
			SCREENING CRITERIA			1	
		T T		ed Concentrations		COMP	COMP
		İ	Soil Ingestion, Dermal	Volatilization to	Leaching to	1	BA20 (CF)
Sample Identification:		1	Contact, and Inhalation	Outdoor Air	Groundwater	BA11 (6.5-11)	Dup of BA11 (6.5-11)
Laboratory Identification:		Background	Excavation			0108196-11	0108196-07
Date Collected:	DAF=20		Worker	Occupational	Occupational	8/27/2001	8/27/2001
SEMIVOLATILES (mg/kg)							
EPA Method SW8270		i					
2,6-Dinitrotoluene	0.0007					0.330 (	J 0.330 U
2-Methylnaphthalene	84 (b)		1			0.067 (	J 0.067 U-
Acenaphthene	570			**		0.067 L	
Acenaphthylene	84 (b)					0.067 (	J 0.067 U
Anthracene	12,000					0.067 (	J 0.067 U
Bénzo(a)anthracene	2		590	Control of	A STATE	0.067	JJ 0.290 J
Benzo(a)pyrene	8		59			0.069	0.280
Benzo(b)fluorenthene	5				# H	0.075	0.450
Benzo(g,h,i)perylene	84 (b)		-			0.067 U	
Berizo(k)fluoranthene	49		5900			0.067 L	
bis(2-Ethylhexyl)phthalate	3600 (c)		No.		magazi magazi banda yangan nga	0.067 U	
Butylbenzylphthalate	930					0.067 t	
Carbazole	0.6					0.067 L	
Chrysene	160		59,000			0.075 J	
Dibenz(a,h)anthracene	2	Heady Tolk Shakes	59			0.067 L	
Dibenzoluran						0.067 L	
Diethylphthalate	3600 (c)	CSTS INTERPRETATION				0.067 L	
Dimethylphthalate Di-n-Butylphthalate	3600 (c)					0.067 L	
Di-n-Octyl phthalate	2300			-	_	0.067 L	
Fluoranthene	10,000	-				0.067 t	
Fluorene	4300 560					0.099 J 0.067 L	
Hexachloroethane	0.5	-				0.130 U	
Indeno(1,2,3-cd)pyrene	0.5					0.067 U	
Naphthalene	84		20,000		15	0.130 U	
Pentachicrophenol	0.03	L. O. M.				0.330 L	
Phenanthrene	84 (b)			tembels in despendent intervals	PC0807 (855) 0059(00	0.100	0.075
Pyrene	4200				31.32.17	0.120 J	
				COMPANY THE REAL PROPERTY OF THE	SAMENARIE VIETE VIENE		
SEMIVOLATILES (mg/kg)							
EPA Method SW8270SIM				1			
Acenaphthene	570					NA	NA
Acenaphthylene	84 (b)					NA.	NA III
Anthracene	12,000					NA	NA
Benzo(a)anthracene	2		590			= NA	NA NA
Benzo(a)pyrene	8		59			NA	NA
Benzo(b)fluoranthene	5.5					NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)	- COMMON TO THE REAL PROPERTY OF THE PERTY O				NA	NA
Benzo(k)fluoranthene	49		5900			NA -	NA
Chrysene	160	-	59,000	-		NA	NA NA
Dibenz(a,h)anthracene	2 4300		59			NA NA	NA.
Fluoranthene Fluorene	4300 560					NA NA	NA NA
Indeno(1,2,3-cd)pyrene	14		590			NA NA	NA NA
Naphthaicne	14 84		20,900		15	INA NA	NA NA
Phenanthrene	84 (b)		40,000			NA NA	NA NA
Pyrene	4200					NA NA	NA NA
Total total of the statement of the San San San San	NO SERVICE SER						
CHLORINATED PHENOLS (mg/kg	, 1						
Method 8040/8270SIM	" I			l	i		1
Pentachlorophenol	0.03					NA	NA
		i		1			
1	,	,		,	,		,

Page 4 of 6

# TABLE C-4b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (>3 FT) PHASE III RI

Page 5 of 6

						CF	FF FEEE CF FEE ME
			SCREENING CRITERIA				_
			Risk-Base	d Concentrations		COMP	COMP
	'	1	Soil Ingestion, Dermal	Volatifization to	Leaching to		BA20 (CF)
Sample Identification:	EPA Region 9		Contact, and inhalation	Outdoor Air	Groundwater		Dup of BA11 (6.5-11)
Laboratory Identification:	PRGs	Background	Excavation		Occupational	0108196-11 8/27/2001	0108196-07 8/27/2001
Date Collected:	DAF=20		Worker	Occupational	Occupational	6/2//2001	0/27/2001
VOLATILES (mg/kg)							
EPA Method SW8260				ļ			
1,2,4-Trimethylbenzene			40,000	790	55	0.002 U	0.001 U
1,2-Dipromoethane			7.1	1.7	0.000059	0.001 U	0.001 U 0.001 U
1,3,5-Trimethylbenzene			40,000		12	0.002 U 0.005 U	
2-Butanone		2000		THE PARTY CONTRACTOR OF THE PARTY OF THE PAR		0.002 U	0.003 U
4-Isopropyltoluene	12 (a)					12.300 J	0.001 0
Acetone	16		9400	48	0.052	0.001 U	0.001 U
Benzene	0.03		9400	48	0.052	0.001 U	
Carson Disulfide	32					0.001 U	0.001 U
Ethylbenzene Isopropylbenzene	13					e.oo1 U	
m.p-Xylene	210 (g)				-	0.002 U	0.002 U
Methyl lodide	210 (g)					0.001.0	0.001-U
Methyl tert-butyl ether				720	0.30	NA	NA
Naphthalene	R4	86-385-BE	20,000	25	75	0.020 U	
n-Butylbenzene	The second secon					0.004 U	0.002 U
n-Propylbenzene	140					U 200 0	
o-Xviene	210 (g)				100 (g)	0.001 U	0.001 U
sec Butybenzene				- 1		0.002 U	
tert-Butylbenzene						0.002 U	0.001 U
Toluene	12				180	0.001 U	0.001 U
						į	
HYDROCARBONS (mg/kg)							
NWTPH-HCID							
Gasoline				80,000	110	23.3 U	24.1 U
Kerosene						58.1 U	60.2 U
Diesel				e - Argent Armana Chamban		58.1 U	60.2 U
Lube Oil						116 U	120 U
NWTPH-Dx (mg/kg)	1			l		1	
TPH-Diesel Range						NA	NA
TCH-Kerasene Bange						NA .	NA.
TPH-Motor Oil Range			*** BARTON SACTORNATIONAL TAXABLE SACTOR			NA	NA
=	ļ						
NWTPH-G (mg/kg)				80,000	110	l NA	NA
TPH-Gasoline Range			-	80,000	110	1 101	
PRIORITY POLLUTANT							
METALS (mg/kg)							
Arsenic (7060)	29	5 (j)				2.47	1.99
Chromium-(6010)	38	23.1		6		17.5	17,2
Copper (6010)		19.1				15.1	15.1
Lead (7421)		9	750		30	2.25	1.75 ∪
Nickel (6010)	130	21.4	**			19.0	18.0
Zinc (6010)	12,000	60.2				52.0	49.7
			Committee Control Control (Appl Contro				
Cadmium (6010)	8		<u>-</u>			NA NA	NA
Mercury (7471)						-NA	- NA
		l	ŀ	Į į		I	

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TABLE C-4b Page 6 of 6

SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: EASTERN PORTION OF PHASE III STUDY AREA (>3 FT) PHASE III RI

						CF	CF
			SCREENING CRITERIA				
		_	Risk-Base	d Concentrations	3	COMP	COMP
			Soil Ingestion, Dermal	Volatilization to	Leaching to		BA20 (CF)
Sample Identification:	EPA Region 9	1	Contact, and inhalation	Outdoor Air	Groundwater	BA11 (6.5-11)	Dup of BA11 (6.5-11)
Laboratory Identification:	PRGs	Background	Excavation			0108196-11	0108196-07
Date Collected:	DAF=20	l	Worker	Occupational	Occupational	8/27/2001	8/27/2001
BETX (mg/kg)		_					
EPA Method SW8021B							
Benzene	0.03		9400	48	0.052	NA.	NA
Ethylbenzene	13					NA	NA NA
Toluene	12				180	NA.	NA
Xylenes, Total	210			ar ar ex	100	NA.	NA
m,p-Xylene	210 (g)				~-	NA.	NA NA
o-Xylene	210 (g)			10.00	100 (g)	NA.	NA
DIOXINS AND FURANS (ng/kg)						!	
Total TEQ						NA	NA

# TABLE C-5a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: ASPHALT ROAD AREA (0-3 FT) PHASE III RI

												0-0.5	116
						SCREENING C	DITEDIA	<del></del>					
						I SCREENING C	nitenia	Risk-	Based Concer	trations		COMP	COMP
	<b>,</b>		\			<b>!</b>				Volatilization to	Leaching to	1	1
Sample Identification:	1						Soil Ingestion, D	ermal Contact	, and Inhalation	Outdoor Air	Groundwater	G20 (0-0.5)	G20 (1-1.5)
Laboratory Identification:	EPA Rog	ion 9 PRGs	İ	Oregon 5	SLVs	Background		Construction				0108208-02	0108208-03
Date Collected:	Industrial	DAF=20	Plants	Mammais	Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/28/2001	8/28/2001
	- Industrial	=											
SEMIVOLATILES (mg/kg)						l							
EPA Method SW8270	620	0.0007	200 (a)	1440 (a)		l	_	-				0.330 U	0.330 U
2,6-Dinitrotoluene 2-Methylnaphthalene	190 (b)	84 (b)	10 (b)	3900 (b)						图 網 多面		0.067 U	0.067 U
Acenaphthene	29000	570	20				41.000	16,000				0.067 U	0.067 U
Acenaphthylene	190 (b)		10 (b)	3900 (b)			75.0					0.067 U	0.067 ⊍
Anthracene	100,000	12,000			Prijerije, met dem mengemengen		77	90,000			-	0.200	0.067 U
Benzota)anthracene	21	2					2.7	21	590			0.320	0.067 U
Benzo(a)pyrene	0.21	8		125	-		0.27	2.1	59			0.590	0.067 U
Benzo(biffuoranthene	2.1	5										1.400	0.067_U
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)								0.410 0.380	0.067 U 0:067 U
Benzo(k)fluoranthene	21	49			100		-27	210	5900			0.130	0.130
bis(2-Ethylhexyl)phthalate	120	3600 (c)	Footeto manife	1020	4.5				- 200-200-200-200-200-200-200-200-200-20			0.130 0.067 U	0.130 0.067 U
Butybenzyiphthalate	100,000	930		1020 (d)	4.6 (d)					20 10 10 10 10 E		0.067 U	0.067 U
Carbazole	86	0.6					270	2100	59.000			0.390	0.067 U
Chrysene	210	<b>160</b>	-				0.27	2.1	59		PROCESS CONTRACTOR	0.067 U	0.067 U
Dibenz(a,h)anthracene	0.21 1600			0.002								0.067-U	0.067 U
Dipenzofutan Diethylphthalate	100,000	3600 (c)	200 (e)		0.45 (e)					-		0.067 U	0.067 U
Dimetryphthalare	100,000	3600 (c)	200 (e)		0.45 (e) +	ALC: N						0.067_U	0.067 U
Di-n-Butylphthalate	62,000	2300	200	30,000	0.45							0.067 U	0.067 U
Di-n-Octyl phthalate	25,000	10,000	200 (e)	35,000 (e)	0.45 (e)	#0**						0.067 U	.0.067 U
Fluoranthene	22,000	4300					29,000	8900				0.750	0.067 U
Fluorene	26,000 =	560			30		35,000	12,000				0.067 U 0.130 U	0.130 U
Hexachioroethane	120	0.5					2.7	21	590		many commenced by the control of the	0.330	0.067 U
Indene(1,2,3 cd)pyrene	2.1	14					770	710	20,000		15	0.067 U	0.067 U
Naphthalene	190 9.0	84 0.03	10	3900				710	20,000			0.330 U	0.330 U
Pentachlorophenol- Phenanthrene	190 (b)	84 (b)	3-				-					0.200	0.067 U
Pyrene	29,000					W. 915	21,000	6700				0.830	0.067 U
1 YIGHG	HENNING WEI	2.92.15842				2.00							l i
SEMIVOLATILES (mg/kg)													
EPA Method SW8270SIM	ĺ											NA NA	NA NA
Acenaphthene	29,000	570	20		**		41,000	16,000				NA NA	NA NA
Acenaphthylene	190 (b)	84 (b)	10 (b)	3900 (b)				90,000	-			NA NA	NA
Anthracene	100,000	12,000				THE PERSON NAMED IN	276	50,000	590		R-22	NA NA	NA 7
Berizo(a)anthracene	2.1 0.21	<b>2</b> 8		125			0.27	2.1	59			NA	NA
Benzo(a)pyrene Benzo(b)fuoranthene	2.1			123								NA.	NA.
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)								NA	NA NA
Benzo(k)fluoranthene	21	49					27	210	5900			NA NA	NA NA
Chrysene	210	160			70 -0		270	2100	59,000			NA	NA NA
Dibenz(a,h)anthracene	0.21	2		11.00			0.27	2.1	59			NA NA	NA NA
Fluoranthene	22,000	4300					29,000	8900				NA NA	NA NA
Fluorene	26,000	560			30	25 100 200 000	35,000	12,000	590			NA NA	NA NA
Indeno(1,2,3-cd)pyrene	2.1	14		3900		-	2.7 -770	21 710	20,000		15	NA.	I NA
Naphthalene	190	84 84 (b)	11.2	3900								NA	NA
Phenanthrene	190 (b) 29.000	84 (D) 4200		mart an as			21,000	6700				NA	NA
Pyrene	29,000	MKOQ TO								The state of the s	energy and the		
CHLORINATED PHENOLS (mg/k	g)					1							
Method 8040/8270SIM	ľ					1							,,
Pentachlorophenol	9.0	0.03	3	30	4					-		NA	NA NA
	I		i			I	I				1	ı	'

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Page 1 of 3

# TABLE C-5a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: ASPHALT ROAD AREA (0-3 FT) PHASE III RI

													0-0.5	145
							SCREENING (	RITERIA						
									Risk-E	Based Concer	ntrations		COMP	COMP
	1										Volatilization to	Leaching to		
Sample Identification:				_				Soil Ingestion, E	Dermal Contact,		Outdoor Air	Groundwater	G20 (0-0.5)	G20 (1-1.5)
Laboratory Identification: Date Collected:		ion 9 PRGs DAF=20	Plants	Oregon Mammals	SLVs Birds	Inverts	Background	Occupational	Construction Worker	Excavation Worker	0	0	0108208-02	0108208-03
	Industrial	DAF=20	Pianis	Mammais	Dirus	invens		Occupational	worker	worker	Occupational	Occupational	8/28/2001	8/28/2001
VOLATILES (mg/kg)														
EPA Method SW8260	l		İ				İ	]						
1,2,4-Trimethylbenzene	170		THE PART OF THE PA	3300 (f)				1500	1400	40,000	790	55	0.001 U	0.001 U
1,2-Dibromoethane	0.073 70						_	0.033	0.25	7.1	1.7	0.000059	0.001 U	0.001 ∪
1,3,5-Trimethylbenzene 2-Butanone	110,000			3300 (f)	-			1500	1400	40,000		12	0.001 U 0.005 U	0.001 U 0.005 U
4-Isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)		-				Control of the control			0.005 U	0.005 U
Acetone	54,000	16	THE CASE	1250									0.005 U	0.005 U
Benzene	1.4	0.03	NAMES CONTRACTOR	3300				34	340	9400	48	0.052	0.001 U	0.003 U
Carbon Disulfide	720	32								100		0.032	0.001 U	0.001 U
Ethylbenzene	400	13		3300 (f)				74,000	28,000				0.001 U	0.001 U
Isopropylbenzene	2000			3300.(f)			-	51,000	24,000				0.001 (J	0 001 U
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)		-		0.002 U	0.002 U
Methyl lodide													- 0.001 U	0.001.U
Methyl tert-butyl ether	70							760	9000	-	720	0.30	NA	NA
Naphthalene	190	84	10	3900				270	710	20,000		15	0.010 U	0.010 U
n-Butylbenzene	240			3300 (f)									0.002 U	0.002 U
n-Propylbenzene	240		- 94	3300 (f)				19,000	9300				0.001 U	0.001 U
o-Xylene	420 (g)	210 (g)	11			154 155 16	 075-086-006-006-0	24,000 (g)	19,000 (g)			100 (g)	0.001 U	0.001 U
sec-Butylbenzene	220			3300 (f)									0.001 U	0.001 U
tert-Butylbenzene Toluene	390		and Siddle-and	3300 (f)					39,000				0.001 U	0.001 U
TOUGHT	080 E	12	200	1440	~			68,000	28/000		10	180	0.001 U	0.001 U
HYDROCARBONS (mg/kg)														
NWTPH-HCID		i												
Gasoline							4-	22,000	13,000		80,000	110	21.3 U	21.7 U
Kerosene													53.2 U	54.3 U
Diesel					BORSI delen Veno		-	70,000	23,000				53.2 U	54.3 U
Lube Cil					#1.#EE								Lube Oil	109 U
NWTPH-Dx (mg/kg)		7												
TPH-Disel Range								70,000	23,000				31.9 U	NA .
TPH Kerosene Bange								70,000	23,000				31.9 U NA	NA NA
TPH-Motor Oil Range								nero-Mora Pradar paga:			2 V9 1 11 11 11 11		301	NA NA
<u> </u>													301	INO
NWTPH-G (mg/kg)		I				1				l			1	
TPH-Gasoline Range						-		22,000	13,000		80,000	110	NA	NA
PRIORITY POLLUTANT						l					1		l	
METALS (mg/kg)										- 1	i	!		
Arsenic (7060)	1.6 (h)	29	10 (i)	29 (i)	10 (i)	60 (i)	5 (j)			.,		}	6.73	2.47
Chromium (6010)	450	28		29 (I) 340:000 (k)			23.1				1-38-95 <u>2</u> -10-0		35.4	14.4
Copper (6010)	41,000		100	390	190	50	19.1			10-105-005-006-006		**	176	12.8
Lead (7421)	800		50	4000	-16	500	9 9	750	750	750	e e e	30	67.8	2.00 U
Nickel (6010)	20,000	130	30	625	320	200	21.4	**	THE RESERVE ASSESSMENT	August State Common and Common an		-	23.4	18.3
Zinc (6010)	100,000	12,000	50 (h)	20,000	60 (h)	200	60:2				E III W.		210	45.7
								220, 120						
Cadmium (6010)	450	8	4	125	6	20						de la company de	NA NA	NA
Mercury (7471)	310		0.3	79	115	0.1							, NA	NA .
		ı				I	l			1	Ţ	ľ		1

Page 2 of 3

# TABLE C-5a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: ASPHALT ROAD AREA (0-3 FT) PHASE III RI

Page 3 of 3

													0-0.5	Jy1.5
							SCREENING C	RITERIA						
									Risk-	Based Concer	ntrations		COMP	COMP
			İ								Volatilization to	Leaching to	1	
Sample Identification:								Soil Ingestion, I	Dermal Contact,	and Inhalation	Outdoor Air	Groundwater	G20 (0-0.5)	G20 (1-1.5)
Laboratory Identification:	EPA Regi	on 9 PRGs		Oregon	SLVs		Background		Construction	Excavation			0108208-02	0108208-03
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	8/28/2001	8/28/2001
BETX (mg/kg)														
EPA Method SW8021B											ĺ			1
Benzene	1.4	0.03	-	3300				34	340	9400	48	0.052	NA	NA NA
Ethylbenzene	400	13		3300 (f)				74,000	28,000				NA	NA NA
Toluene	520	12	200	1440				68,000	39,000		-	180	NA	NA.
Xylenes, Total	420	210			4.0			24,000	19,000	(1) 1 <b></b> 11		100	NA	NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)	-			NA	NA
o-Xylene	420 (g)	210 (g)	5.1				2 / July 1	24,000 (g)	19,000 (g)			_100 (p)	NA -	NA
DIOXINS AND FURANS (ng/kg)														ĺ
Total TEQ					-		-		**	200		-	NA	NA

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Page 1 of 3

## TABLE C-5b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: ASPHALT ROAD AREA (>3 FT) PHASE III RI

						CF.	CE IN
			CODEELING CONTENT				
		T	SCREENING CRITERIA	ed Concentration		COMP	COMP
			Soil Ingestion, Dermal	Volatifization to	Leaching to	COMP	G28 (CF)
Sample Identification:	EPA Region 9		Contact, and Inhalation	Outdoor Air	Groundwater	G20 (10.5-14.5)	Dup of G20 (10.5-14.5)
Laboratory Identification:		Background	Excavation			0108208-05	0108208-01
Date Collected:	DAF=20		Worker	Occupational	Occupational	8/28/2001	8/28/2001
SEMIVOLATILES (mg/kg)	1						
EPA Method SW8270					1		
2,6-Dinitrotoluene	0.0007			-		0.330 U	0.330 U
2 Methylnaphthalone	84 (b)					0.067 U	0.067 U
Acenaphthene	570					0.067 U	
Acenaphthylene	84 (b)					0.067 U	
Anthracene	12,000		Carlo della carlo			0.067 U	
Berizo(a)anthracene	2.	SERVICE STATE	2.4 L 590			0.067 U	
Benzo(a)pyrene Benzo(b)fluoranthene	8 5		59			0.067 U	
Benzo(g,h,i)perylene	84 (b)		Excellent artist			0,067 U 0,067 U	
Benzo(k)fluoranthene	49		5900			0.067 U	
bis(2-Ethylhexyl)phthalate	3600 (c)	-				0.067 U	
Butylbenzylphthalate	930					0 367 U	
Carbazole	0.6		4-			0.067 U	
Chrysene	160		59,000		Application for the second	-0.067 U	0.067 U
Dibenz(a,h)anthracene	2		59		-	0.067 U	
Diberizofuran						0.067 U	
Diethylphthalate	3600 (c)		-			0.067 U	
Dimethylphthalate	3600 (c)					0 067 U	
Di-n-Butylphthalate	2300				LEGISTO SELENCES ESTA	0.067 U	
Din-Octyl phthalate Fluoranthene	10,000 4300			1.015	- 1	0.067 U 0.067 U	0.067 U 0.067 U
Fluorantnene	4300 560					0.067 U	
Hexachloroethane	0.5					0.130 U	0.130 U
Indeno(1,2,3-cd)pyrene	14		590			0.067.13	
Naphthalene	84		20,000		15	0.067 U	0.067 U
Pentachioropheriol	0.03					0.330 ∪	
Phenanthrene	84 (b)					0.067 U	0.067 U
Pyrene	4200			ation and a programme		0.067 U	0.067 U
SEMIVOLATILES (mg/kg)							
EPA Method SW8270SIM	570						
Acenaphthene Acenaphthylene	570 84 (b)					NA NA	NA NA
Anthracene	12,000					NA NA	NA NA
Benzo(a)anthracene	12,000		590			NA NA	NA NA
Benzo(a)pyrene	8	*	59			NA NA	NA NA
Benzo(b)fluorenthene	6	THE RESERVE			No.	NA	NA NA
Benzo(g,h,i)perylene	84 (b)			**		NA	NA
Benzo(k)fluoranthene	49		5900			NA.	NA NA
Chrysene	160		59,000			NA	NA NA
Dibenzía,h)anthracene	2		590 (1)			NA NA	NA NA
Fluoranthene	4300					NA	NA
Fluorene	560				100 Miles	NA .	NA NA
Indeno(1,2,3-cd)pyrene Naphthalene	14 84		590 20,000		16	NA NA	NA NA
Phenanthrene	84 (b)	S AND THE SALES	20,050		9 20 20	NA NA	NA NA
Pyrene	4200					NA NA	NA NA
ATTACAMA PART CONTRACTOR						1.7	11/1
CHLORINATED PHENOLS (mg/kg	, 1				1		
Method 8040/8270SIM	<i>*</i>	1			I		
Pentachlorophenol	0.03					NA	NA
	l	1		ļ	l		ļ

TABLE C-5b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: ASPHALT ROAD AREA (>3 FT) PHASE III RI Page 2 of 3

						CF.	CF
			SCREENING CRITERIA				
		1		ed Concentration	e .	COMP	COMP
		l	Soil Ingestion, Dermal	Volatilization to	Leaching to	1	G28 (CF)
Sample Identification:	EPA Region 9	1	Contact, and Inhalation	Outdoor Air	Groundwater	G20 (10.5-14.5)	Dup of G20 (10.5-14.5)
Laboratory Identification:		Background	Excavation			0108208-05	0108208-01
Date Collected:	DAF=20	I	Worker	Occupational	Occupational	8/28/2001	8/28/2001
VOLATILES (mg/kg)	1				i		
EPA Method SW8260							
1,2,4-Trimethylbenzene			40,000	790	55	0.001 U	0.001 U
1,2-Dibromoethane			7-11-1-1	1,7	0.000059	0,001 U	- U.001-U-1
1,3,5-Trimethylbenzene			40,000	_	12	0.001 U	0.001 U
2-Butanone						0.005 U	0.005 U
4-Isopropyltoluene	12 (a)					0.001 U	
Acetone	16	.5%*				0,005 U	
Benzene	0.03		9400	48	0.052	0.001 U	
Carbon Disulfide	32	-				0.001 U	
Ethylbenzene	13					0.001 U	
Isopropylbenzene						0.001 U	
m,p-Xylene	210 (g)	CONCESSION CONTRACTIVES TO	CONTRACTOR STATE OF THE STATE O		TOTAL TENEDON PROCESSOR STATE	0.002 U	
Methyl lodide						0.001 U	CONTRACTOR AND ADDRESS OF THE PARTY AND ADDRES
Methyl tert-butyl ether	84		20.000	720	0.30	NA 0.010 U	NA 0:010 U
Naphthalene	84		20,500		15	0.002 U	
n-Butylbenzene n-Propylbenzene	-		THE COURSE THE PROPERTY AND	CONTRACTOR CONTRACTOR OF		0.002 0	
o-Xviene	210 (g)	PART TOTAL			100 (g)	0.001 U	0.001 U
sec-Butylbenzene	210 (g)				100 (g)	0.001 U	
tert-Bulylbenzene		DOMESTICAL PROPERTY.		000000-000-000-000-00-0	CONTRACTOR OF THE PARTY AND PARTY AN	0.001 U	0.001 U
Toluene	12				180	0.001 U	
HYDROCARBONS (mg/kg)							
NWTPH-HCID							
Gasoline				80,000	110	23.5 U	23.5 U
Kerosene						58.8 U	58.8 U
Diesel		-				58.8 U	58.8 U
Lube Oil						118.⊍	118 U
NWTPH-Dx (mg/kg)							i
TPH-Diesel Range						NA	NA NA
TPH-Kerosene Bange						NA NA	NA NA
TPH-Motor Oil Range						NA NA	NA NA
,					i		
NWTPH-G (mg/kg)					1		
TPH-Gasoline Range			-	80,000	110	NA	NA
PRIORITY POLLUTANT							
METALS (mg/kg)					ľ		
METALS (mg/kg) Arsenic (7060)	29	5 (1)	_			3.03	2.67
Chromium (6010)	29 38	3 (J) 28 1				3.03	14.2
Copper (6010)	-	19.1	na nga nyajariyalla Siana barringa disalari			12.7	12.7
Lead (7421)		9	750		30	2.00 U	
Nickel (6010)	130	21.4				16.1	16.1
Znc (6010)	12,000	60.2				43.3	45.9
						and the second second	THE WAY - BOX - COMP OF SHIP OF SHIP - SHIP
Cadmium (6010)	8					NA	NA
Mercury (7471)						NA NA	NA
	,						

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## TABLE C-5b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: ASPHALT ROAD AREA (>3 FT) PHASE III RI

Page 3 of 3

						CF	CF
			SCREENING CRITERIA				
			Risk-Base	d Concentrations		COMP	COMP
			Soil Ingestion, Dermal	Volatilization to	Leaching to	1	G28 (CF)
Sample Identification:			Contact, and Inhaiation	Outdoor Air	Groundwater	G20 (10.5-14.5)	Dup of G20 (10.5-14.5)
Laboratory Identification:	PRGs	Background	Excavation			0108208-05	0108208-01
Date Collected:	DAF=20		Worker	Occupational :	Occupational	8/28/2001	8/28/2001
BETX (mg/kg)							
EPA Method SW8021B							İ
Benzene	0.03		9400	48	0.052	NA.	NA
Ethylbenzene	13					NA.	NA NA
Toluene	12	-			180	NA	NA
Xylenes, Total	210	- 4			100	. NA	NA
m,p-Xylene	210 (g)		-			NA	NA
o-Xylene	210 (0)			VF-07/2	100 (g)	- III NA	NA NA
DIOXINS AND FURANS (ng/kg)						l	
Total TEQ			-	-		NA	NA

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TABLE C-6a Page 1 of 3

## TABLE C-6a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: PHASE II STUDY AREA (0-3 FT)

												0-0.5	0-0:5	0-0.5	0-0.5	1-1.5
1			_			SCREENING O	RITERIA									
			T			I	T	Risk-	Based Concer	ntrations		1				
						Site-				Volatilization to	Leaching to	1				
Sample Identification:						Specific	Soil Ingestion,	Dermal Contact	, and Inhalation	Outdoor Air	Groundwater	LB16 (0-0.5)	LS1(0-0.5)	LS2(0-0.5)	LW1D (0.0-0.5)	LB10(0.5-2.0)
Laboratory Identification:		ion 9 PRGs	<u> </u>	Oregor		Background		Construction	Excavation			R923AY	Q650A	Q650B	R950O	Q650AL
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds Inverts		Occupational	Worker	Worker	Occupational	Occupational	03/12/97	10/23/96	10/23/96	03/14/97	10/24/96
SEMIVOLATILES (mg/kg)																
EPA Method SW8270												1				
2,6-Dinitrotoluene	620	0.0007	200 (a)	1440 (a)						-		0.38 U	0.36 U	NA	NA.	NA
2-Mothylnaphthallene	190 (6)	84 (b)	10 (b)	3900 (b)		101 - 0	- ·	+ 1				0.076 U	0.079 U	- NAT	NA NA	NA NA
Acenaphthene	29000	570	20				41,000	16,000	 (11888) 170(028) 1802-4		-	0.076 U	0.073 U	NA	NA	NA NA
Acenaphthylene Anthracene	190 (b) 100,000	. 64 (b) 12,000	≡10 (b)	3900 (b)								0.076 ⊍			NA.	NA.
Benzo(a) anthracene	21	12,000					27	90,000 21	590			0.076 U 0.15	0.073 U 0.073 U	NA NA	NA	NA NA
Benzo(a)pyrene	0.21	8		125			0.27	2.1	59			0.26	0.073 U	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	21	5			4.		0.27					0.22	0.073 U	NA.	NA NA	NA NA
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)								0.4	0.073 U	NA NA	NA.	NA NA
Benzo(k)/luoranthene	21	49	医凝糊				27	210	_5900 **	74.0		0.15	0.073 U		NA NA	NA.
bis(2-Ethylhexyl)phthalate	120	3600 (c)	P. Million Proces	1020	4.5	-	***************************************	-		-		0.076 U	0.31	NA	NA	NA
Butythenzylphthalate	100,000	930		1020 (d)								0.076 U			NA NA	. NA
Carbazole Chrysene	96 210	0.6					270	2100	 59.000			0.076 U	0.073 U	NA	NA	NA
Dibenz(a,h)anthracene	0.21	1 <b>60</b> 2					0.27	2100	59.000			=0,24 0,079	0.073 U	NA.	NA NA	NA NA
Dibenzofuran	1600	المراكب أرادها		0.002			0.21	4.1	59			0.079 0.076 U	0.073 U 0.073 U	NA NA	NA NA	NA NA
Diethylphthalate	100,000	3600 (c)	200 (e)	30,000 (e)								0.076 U	0.073 U	NA NA	NA NA	NA NA
Dimethylphthalate	100,000	3600 (a)	200 (e)	30,000 (e)	0.45 (6)		WALLS					0.076 U	0.073 U		NA.	NA J
Di-n-Butylphthalate	62,000	2300	200	30,000	0.45							0.076 U	0.073 U	NA	NA	NA
Di-n-Cotyl phthalate	25,000_	10,000	_200 (e)	30:000 (e)	0.45 (e) ···		1 4 4 6 5				STREET, STREET	0.076 U	0.073 U	NA	NA.	NA.
Fluoranthene	22,000	4300					29,000	8900			The state of the s	0.33	0.073 U	NA	NA NA	NA
Fluorene	26,000	-560			30		35,000	12,000				0.076 U	0.073 U	NA	NA NA	NA NA
Hexachloroethane Indeno(1,2,3-cd)pyrene	120 <b>2.1</b>	0.5						 5 10 1121 5 5 5		-	internation to SEPT	0.15 U	0.15 U	NA	NA NA	NA NA
Naphthalene	190	84	10	3900			2.7 770	710	590 20,000		15	0.28 0.076 U	0.073 U 0.073 U	NA NA	NA NA	NA NA
Pentachlorophenol	9.0	0.03	3 9	30	4		770		20,000		13	0.38 U	0.073 U	NA NA	NA NA	NA NA
Phenanthrene	190 (b)	84 (b)	-			***	-	CONTRACTOR STATES				0.14	0.073 U	NA NA	NA	NA
Pyrene.	29,000	4200					21,000	6700				0.68	0:078 U	- NA	NA NA	NA NA
SEMIVOLATILES (mg/kg)																
EPA Method SW8270SIM Acenaphthene	29,000	570	20				** ***			I						
Acenaphtrylene	29,000 190 (5)	84 (b)		3900 (b)		- 	41,000	16,000				NA	NA NA	NA NA	0.0071 U	NA
Anthracene	100,000	12.000	10/10/	Once (D)				90,000	Maria de la compania de la compania de la compania de la compania de la compania de la compania de la compania	ALTERNATION DE		NA NA	NA NA	NA NA	0.021 0.22	NA J
Benzo(a)anthracene	21						2.7	21	590			NA NA	NA NA	NA NA	0.22	NA NA
Benzo(a)pyrene	0.21	8		125		**	0.27	2.1	59			NA	NA NA	NA	0.24	NA
Benzo(b)fluoranthene	2.1	5									Frank-Line	NA NA	NA II	NA	0.23	NA.
Benzo(g,h,i)perylene	190 (b)	84 (b)	10 (b)	3900 (b)								NA	NA	NA	0.42	NA
Benzo(k)fluorantherie	21	49					27	210	5900			NA .	- NA	NA NA	0.15	NA.
Chrysene	210	160	CONTROL SANCTON AS	onstrument den Salem			270	2100	59,000			NA	NA	NA	0.22	NA
Dibenz(a.fl)anthracene Fluoranthene	<b>0.21</b> 22,000	2 4300				100.00	0.27	2.1	59			NA .	NA .	NA NA	0.035	NA .
Fluorene	26,000	560		107050	30		29,000 35,000	8900 12,000				NA NA	NA	NA	0.31	NA
Indeno(1,2,3-cd)pyrene	2.1	14			48.77 18 18 18 18 18 18 18 18 18 18 18 18 18	-	2.7	21	590			NA NA	NA NA	NA NA	0.0071 U 0.27	· NA
Naphthalene	190	84	. 10	3900			7702	710	20,000	***************************************	15	- NA	NA NA	NA S		NA NA
Phenanthrene	190 (b)	84 (b)						**		•-		NA	NA	NA	0.09	NA
Pyrene	29,000	4200	- 4				21,000	6700				NA	NA	NA		NA.
		ļ			J				T							
CHLORINATED PHENOLS (mg/kg) Method 8040/8270SIM		İ				l			- 1	I	I				ľ	
Pentachlorophenol	9.0	0.03	3	30					- 1		- ⊢	0.14	0.05 !!	0011		0.0007.1
, s. mas no opiicioi	0.0	0.00	Ÿ	30				-	- 1	- 1	~ }	0.14	0. <b>05</b> U	0.2 U	0.034 J	0.0067 U
'		'			ı	1			ı	- 1	1				ļ	I

7/19/05 \\Edmdata\\wproc\231\009\132\\PhiII RI 071905\\PhIII RI Rpt\_App C \ PHII 0-3

Page 2 of 3

## TABLE C-6a SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: PHASE II STUDY AREA (0-3 FT)

												0-0.5	0-0.5	0-0.5	0-0.5	1-1/5 % 3 %
					-	SCREENING (	CRITERIA									
								Risk-	Based Concer			1				
			l			Site-	1			Volatilization to	Leaching to	]				
Sample Identification:	l			_		Specific	Soil Ingestion, D			Outdoor Air	Groundwater	LB16 (0-0.5)	LS1(0-0.5)	LS2(0-0.5)	LW1D (0.0-0.5)	LB10(0.5-2.0)
Laboratory Identification: Date Collected:	Industrial	on 9 PRGs DAF=20	Plants	Oregon Mammals	SLVs Birds Inverts	Background	Occupational	Construction Worker	Excavation Worker	Occupational	Occupational	R923AY	Q650A 10/23/96	Q650B 10/23/96	R950O	Q650AL
	muusman	UAF=20	Fights	Mammais	Birds invers	<del>                                     </del>	Occupational	worker	worker	Occupational	Occupational	03/12/97	10/23/96	10/23/96	03/14/97	10/24/96
VOLATILES (mg/kg)											1	1				
EPA Method SW8260	l															
1,2,4-Trimethylbenzene	170	-	-	3300 (f)			1500	1400	40,000	790	55	NA	NA	NA	NA	NA NA
1,2-Diolomoethane 1,3,5-Trirnethylbenzene	<b>0.07</b> 3 70			0000 (0			0 033 1500	0.25	71	1.7	0.000059	NA/	NA -	- NA	ŅA	NA.
2-Butenone	110,000			3300 (f)			1500	1400	40,000	-	12	NA NA	NA 0.0052 LL	NA NA	NA NA	NA NA
4-isopropyltoluene	520 (a)	12 (a)	200 (a)	1440 (a)				-				NA NA	0.0052 U NA	NA NA	NA NA	NA NA
Acetone-	54,000	16	200 (a)	1250								NA.	0,0052 U	NA.	NA NA	NA NA
Benzene	1.4	0.03		3300	open the lateral later		34	340	9400	48	0.052	NA	0.001 U	NA NA	NA NA	NA NA
Carbon Disuffice	720	32			-			40-04				NA NA	0.001 U		NA NA	NA NA
Ethylbenzene	400	13		3300 (f)			74,000	28,000			Pro- cook - entire tak tak at the	NA	0.001 U	NA	NA NA	NA NA
Iscpropylbenzene	2000			3300 (f)			51,000	24,000				NA.	. NA	NA.	. NA	NA
m,p-Xylene	420 (g)	210 (g)					24,000 (g)	19,000 (g)	**	**		NA	0.001 U	NA	NA	NA NA
Methyl lodide			-000									NA .	NA .	NA NA	NA.	NA
Methyl tert-butyl ether	70		-				760	9000		720	0.30	NA	NA	NA.	NA NA	NA NA
Naphthalene	190	84	10	3900			770	710.	20,000		15	NA .				NA
n-Butylbenzene	240			3300 (f)								NA	NA	NA	NA	NA NA
n-Propylbenzene	240			3300 (f)			19,000	9320				NA			NA.	NA .
o-Xylene	420 (g)	210 (g)	1				24,000 (g)	19,000 (g)			100 (g)	NA	0.001 U	NA	NA	NA
sec Bulyibenzene tert-Butylbenzene	-220 390			= 3300 (f)								NA. 1	IVA.		NA.	NA
Toluene	390 520	12	200	3300 (f) 1440			eo one	39,000			180	NA NA	NA NA	NA	NA NA	NA NA
Dillerie	320		2000	1440			00,000	39,000	ar elektrik inderli		100		0.001 0	na.	102	N/A
HYDROCARBONS (mg/kg)																
NWTPH-HCID																
Gasoline							22,000	13.000		80.000	110	NA	20 U	20 U	NA	20 U
Kerosene							EE,000	15,000		00,000		NA.	NA -	NA NA	NA NA	NA NA
Diesel							70,000	23,000	el Constitue de Lacon Maria Cara		The state of the s	NA	140	35	NA NA	25 U
Lube Oil											535475	NA NA	420	130	NA NA	50 U
				and the second s	Contraction of the se	The same of the sa		Mary County County April 19	THE RESERVE THE PROPERTY OF THE PARTY OF THE	The second secon	PER-2008-100-00-00-00-00-00-00-00-00-00-00-00-00	894 ph 495 1				
NWTPH-Dx (mg/kg)										1	İ					
TPH-Diesel Range TPH-Kerosene Range			FIELD ST	CONTROL OF	e babanesi es	-	70,000	23,000				45	160 NA	NA	85	NA
TPH-Motor Oil Range	1.75	******							- Andrewson St.	in the second se	***************************************	NA NA	NA NA	NA NA	NA.	NA
, i												NA	NA	NA	NA NA	NA
NWTPH-G (mg/kg)									ľ	İ						
TPH-Gasoline Range							22,000	13,000		80,000	110	5.0 U	NA	NA	5.0 U	NA
									i							
PRIORITY POLLUTANT																
METALS (mg/kg)			4 8 70													
Arsenic (7060) Chromium (6010)	1.6 (h) 450	29 - 38	10 (i)	29 (i) 340.000 (k)	10 (i) 60 (i) 4 (h)(k) 0.4 (h)(k)	5 (j) 23.1		H. Change Laborator				NA NA	6 U	NA NA	NA NA	NA NA
Copper (6010)	41,000		1 (h)(k) 100	390	4 (m)(k) U.4 (m)(k) 190 50	2 <b>3.1</b> 19.1	<b>第75月87日前の日</b> 日	10				NA 350	18,4 26,3	NA NA	NA NA	NA NA
Lead (7421)	800		50	4000	16 500	9	 750	750	750		30	NA NA	26.3	NA NA	NA NA	NA NA
Nickel (6010)	20,000	130	30	625	320 200	21.4		750	/30			NA NA	21	NA NA	NA NA	NA NA
Zing (6010)	100 000	12,000	=50 (h)	20,000	60 (h) 200	60.2						143		NA NA		NA NA
	The same of the sa	- ITT DEED	- de un				erances, trees to again, 40 miles					TVO SET	The state of the s	uerustristi 1200 killi	-constitution and the second	Control of the Section
Cadmium (6010)	450	8	4	125	6 20							NA	0.3	NA	NA	NA
Mercury (7471)	910		0.8		1.5 0.1				10 CS - 10 T			NA.	= 0.05 U			NA NA
																The second secon
											•				•	

													0-0.5	0-0.5	0-0.5	0-0.6	∴ ∜1-1.5
Γ							SCREENING C	RITERIA									
Γ									Risk-	Based Concen	trations						
1							Site-				Volatilization to	Leaching to					l
Sample Identification:							Specific	Soil Ingestion, D	ermal Contact,	and Inhalation	Outdoor Air	Groundwater	LB16 (0-0.5)	LS1(0-0.5)	LS2(0-0.5)	LW1D (0.0-0.5)	LB10(0.5-2,0)
Laboratory Identification:	EPA Regio			Oregon 9			Background		Construction	Excavation			R923AY	Q650A	Q650B	R950O	Q650AL
Date Collected:	Industrial	DAF=20	Plants	Mammals	Birds	Inverts		Occupational	Worker	Worker	Occupational	Occupational	03/12/97	10/23/96	10/23/96	03/14/97	10/24/96
BETX (mg/kg)																	
EPA Method SW8021B																	
Benzene	1.4	0.03		3300				34	340	9400	48	0.052	0.057 U	NA	NA	0.053 U	l NA
Ethylbenzene	400	13		3300 (f)				- 74,000					0.057 U	NA -	NA -		
Toluene	520	12	200	1440				68,000	39,000	**		180	0.057 U	NA	NA	0.053 U	NA NA
Xylenes, Total	420	210	Twee 2		-			24,000	19,000			100	NA	NA.	NA NA	NA NA	NA NA
m,p-Xylene	420 (g)	210 (g)						24,000 (g)	19,000 (g)	**	**		0.057 U	NA	NA	0.053 U	NA.
o-Xviene	420 (g)	210 (g)		14 June 1				24,000 (g)	19,000 (g)	ant are seen		100 (g)	0.057 U	NA	NA.	0.053 U	NA NA
	CO CO CHICA MARCHARDA			E -04-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0						34-04-36-36-36	-VALUE			-ESCALE BEE-ASSAULTS	DEP-RICH VARONA - LAP-UE	- W. S - WASS EDGS 12 - May - SWA	
DIOXINS AND FURANS (ng/kg)										i							
Total TEQ													NA	NA	NA	NA	NA

TABLE C-6b Page 1 of 24

						5-5.5	5-5.5	5-5 5	5-5.5	5-5.5	5-5.5	CF	CF	CF	CF	CF	CF *** ***
:			SCREENING CRITERIA		-											<del></del>	
				ed Concentration													
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to	l											
Sample identification: Laboratory Identification:	EPA Region 9 PRGs	Specific Background	Contact, and Inhalation Excavation	Outdoor Air	Groundwater	LB8 (3.5-5.0) Q650AH	LB8(5-6.2) Q650Al	LB15 (5-6.5) R923Q	LB16 (5-6.5) R923AZ	LB20 (2.5-4.0) R923AJ	LB24 (2.5-4.0) S057A	LB1(11-12.5) Q650P	LB1(15.5-16.5) Q650Q	LB2(12-13.5)	LB2(18.5-19.5)	LB3(12-13.5)	LB3(17-18)
Date Collected:	DAF=20	Background	Worker	Occupational	Occupational	10/24/96	10/24/96	03/10/97	03/12/97	03/11/97	03/21/97	10/23/96	10/23/96	Q650S 10/23/96	Q650T 10/23/96	Q650V 10/23/96	Q650X 10/23/96
	5711-20	<del>†</del>	TYDIKCI	Оссырациона	Cocapanona	10/24/50	10/24/00		00/12/01	00/11/07	05/21/57	10/20/30	TOPEGRAD	10/20/30	10/20/00	10/20/00	10/20/90
SEMIVOLATILES (mg/kg) EPA Method SW8270				İ													
2.6-Dinitrotoluene	0.0007					NA.	NA	NA	NA	NA	NA	. NA	NA	NA	NA	0.4 U	NA
2 Methylnaphthalene	84 (b)					INA		NA !	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.4 U	NA NA
Acenaphthene	570					NA NA	NA.	NA	NA.	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	0.08 U	NA NA
Acenaphthylene	84 (b)					NA.		NA.		NA	NA NA	NA	NA NA	: NA	NA NA	0.08 U	NA NA
Anthracene	12,000		BOOK, RESILENCE No. STATE CONTRACTOR CONTRACTOR	-	***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	U 80.0	NA
Benzo(a)anthracene	2		590=		2.00	NA.	NA	NA.	NA NA	NA.	NA NA	N.A.	NA NA	NA NA	NA.	0.08 U	
Benzo(a)pyrene	8		59			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08 U	NA
Benzo(b)/luoranthene	5	2312			***	NΑ		NA.	NA.	NA		NA-	. NA	NA -	- NA	0.08 U	NA .
Benzo(g,h,i)perylene	84 (b)					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08 U	NA
Benzo(k)jiugranthene	49		5900			NA.		NA_	NA	NA NA	NA	NA.	NA	NA:	NA NA	0.08 U	NA
bis(2-Ethylhexyl)phthalate	3600 (c)					NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA	0.08 U	NA
Bülyibenzyiphthalate Carbazole	930		4			NA NA	- NA NA	NA:	NA NA	NA NA	NA NA	NA NA	, NA NA	NA NA	NA NA	0.08 U	NA
Chrysene	160		59.000			NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.08 U 0:08 U	NA NA
Dibenz(a,h)anthracene	2		59		2017日前10日日日日日	NA	NA NA	NA NA	NA.	NA NA	NA NA	NA.	NA.	NA NA	NA NA	0.08 U	NA
Dihenzafuran						NA NA			NA NA	NA.	NA NA	NA.	NA	NA.	NA.	c.ce/U	NA NA
Diethylphthalate	3600 (c)			**	**************************************	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08 U	NA
Dimethylphthelate	3600 (c)		Y38 - 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			NA.	NA.	NA	NA.	NA NA	NA NA	NA NA	s NA	NA.	NA	0.08 Ü	
Di-n-Butylphthalate	2300					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08 U	NA NA
Di-n-Octyl phthalate	10,000	~ 11.11				NA.	NA.	NA NA	NA	NA	NA.	NA.	. NA	NA:	NA NA	0.08 U	NA .
Fluoranthene	4300			n-	and the same of the same of the	NA	NA.	NA	NA NA	NA	NA	NA	NA	NA	NA	0.08 U	NA
Eluorane	560					NA NA	NA NA	NA NA	NA-	NA:	- NA	NA	NA NA	NA NA	NA NA	0.08 U	NA.
Hexachloroethane	0.5					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	0.16 U	NA
Indeno(1,2,3-cd)pyrene	14		590			NA.		NA I		NA		NA_	NA NA	NA	NA	0.08 U	NA.
Naphthalene Pentachlorophenol	84 <b>0.03</b>		20,000		15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	0.08 U	NA
Phenanthrene	84 (b)		research and the second	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.4 U 0.08 U	NA NA
Pyrene			-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA =	NA -	0.08 U	NA NA
The state of the s					to a transfer of the same				to a constant of the constant			E STATE COLUMN	INC.		- UA		
SEMIVOLATILES (mg/kg)																	
EPA Method SW8270SIM																	
Acenaphthene	570					NA	NA	0.0075 U		0.0075 U	NA	NA	NA .	NA	NA NA	NA	NA
Aconaphthylene	84 (b)			MARKET ST		NA	NA	0.0075 U	0.0076 U	0.0075 U	■NA	NA	NA	NA .	NA NA	NA NA	: NA
Anthracene	12,000		eresseen over a value of a series of		Processor Services	NA	NA_	0.0082	0.0076 U	0.0075 U	NA	NA	NA	NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	2 2		590			NA.	NA NA	0.075	0.0076 U			NA NA	· · · NA	- NA	NA.	NA.	
Benzo(a)pyrene	8		59			NA NA	NA	0.15	0.031	0.0075 U	NA NA	NA NA	NA	NA NA	NA	NA	NA
Benzo(b)fluoranthene Benzo(g,h,i)perylene	5 84 (b)	Maria Cara				NA.	NA NA	0.28 0.068	0.0076.U 0.0092	0.0075 U 0.0089		NA NA	NA NA			NA.	NA
Benzo(k)fluoranthenc = ====	84 (B) 49		5900			NA NA	NA NA	0.068	0.0092 0.0076 U		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene	160	-	59,000 59,000	WOLLD STATE OF THE		NA NA	NA NA	0.21	0.038	0.0075 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a;h)anthracene	2		59,000 89			NA NA		0.018	0.0076 U		NA NA	NA .	NA NA	NA -	NA NA	NA NA	NA NA
Fluoranthene	4300					NA	NA	0.098	0.0076	0.0075 U	NA	NA	NA	NA NA	NA	NA NA	NA
Flüorené	560					NA NA	NA NA	0.0075 U	0.0076 ∪	0.0075 U		NA	NA.	NA .	NA.	NA.	NA NA
Indeno(1,2,3-cd)pyrene	14		590		-	NA	NA	0.089	0.0084	0.0075 U	NA	NA	NA	NA	NA	NA	NA
Naphthalene	84	(A	20,000		15	NA .		0.0075 U				NA .	NA	NA.	. NA	. NA	NA
Phenanthrene	84 (b)	N-91 290 N-01				NA	NA	0.0075 U	0.0076 U	0.0075 U	NA	NA	NA	NA	NA	NA.	NA
Pyrene.	4200					NA	NA NA	0,18 d	0:011	0 0075 U	. NA	NA	NA.	N/A	NA.	NA _	NA
SUI ORINIAMEN MUNICIPAL ST	J	J	J	J	j						ļ						
CHLORINATED PHENOLS (mg/kg)	' 1	ĺ		ĺ	[						ĺ						
Method 8040/8270SIM Pentachlorophenol	0.03		İ	l	-	0.033	0.0066 U	0.037	0.0071 U	0.7	NA NA	0.008 U	0.008 U	0.004	0.0083 U	0.05	0.004
r Gridonorophenor	0.03	- 1	-	-	h	0.033	U.UU06 U	0.037	0.0071 0	0.7	INA	U.U.O U	U.008 U	0.004	U.UU03 U	0.05	0.001
1	ı	ı	1	ı	1						ı						

TABLE C-6b

## TABLE C-6b SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: PHASE II STUDY AREA (>3 FT)

						5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5. <b>5</b>	CF CF	CF CF	CF	CF	CF	CF HATE
			SCREENING CRITERIA				· · · · ·					+					-
				ed Concentration		]											
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to							1					
Sample Identification:	EPA Region 9 PRGs	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB8 (3.5-5.0)	LB8(5-6.2)	LB15 (5-6.5)	LB16 (5-6.5)	LB20 (2.5-4.0)	LB24 (2.5-4.0)	LB1(11-12.5)	LB1(15.5-16.5)	LB2(12-13.5)	LB2(18.5-19.5)	LB3(12-13.5)	LB3(17-18)
Laboratory Identification: Date Collected:	DAF=20	Background	Excavation Worker	Occupational	Occupational	Q650AH 10/24/96	Q650AI 10/24/96	R923O 03/10/97	R923AZ 03/12/97	R923AJ 03/11/97	S057A 03/21/97	Q650P 10/23/96	Q650Q 10/23/96	Q650S 10/23/96	Q650T 10/23/96	Q650V 10/23/96	Q650X 10/23/96
	DAI =20		VVCIRGI	Оссараноны	Оссаралоны	10/24/30	10/24/30	00/10/37	OU/TES/	03/11/87	03/21/07	10/20/30	10/23/30	10/2,0/30	10/25/30	10/23/30	10/23/30
VOLATILES (mg/kg) EPA Method SW8260																	
1,2,4-Trimethylbenzene	_		40,000	790	55	NA.	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA
1,2 Dibromoethane	Caraca		7,1	7,30	0.000059	NA NA	NA.	NA NA		NA NA	NA NA			NA NA	NA NA	NA.	NA -
1,3,5-Trimethylbenzene	**************************************		40,000	and the second second second	12	NA.	NA	NA	NA NA	NA NA	NA NA	NA.	NA	NA	NA NA	NA NA	NA NA
2-Butanone	10100-001					NA.	NA.	NA NA	NA NA		NA NA	NA I		NA	NA NA	0.74 U	
4-Isopropyltoluene	12 (a)		**	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	16					NA NA	NA:	NA NA	NA.	. NA	. NA	NA:	NA.	NA NA	NA .	0.96 ⊍	NA .
Benzene	0.03		9400	48	0.052	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.15 U	NA
Carpon Disulfide	32	-				NA NA	NA NA	NA .	NA NA	NA =		NA.	NA NA	NA.	NA .	045 U	
Ethylbenzene Isopropylbenzene	13		. 457. 247.0			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.15 U NA	NA
m,p-Xylene	210 (g)					NA NA	na NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA 0.15 U	NA NA
Methyl lod de	210 (g)		ile on more position of the			NA.	NA NA	NA NA	NA!		NA NA	NA NA	NA NA	NA NA	NA NA	0.15 U	NA NA
Methyl tert-bulyl ether	 2007-1000-1-1-0-1-1-1-1-1-1-1-1-1-1-1-1-1		**	720	0.30	NA	NA	NA NA	NA	NA NA	NA NA	NA.	NA	NA NA	NA NA	NA.	NA NA
Naphthalene	84		20,000	200	15	NA.		NA .		NA NA		NA	NA.	NA NA	NA NA	NA.	
n-Butylbenzene	••	-			-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene		10 T				NA .	NΑ		NA NA	NA NA	NA NA	NA.	NA:	. NA	NA.	NA NA	NA
o-Xylene	210 (g)			B-508/2007	100 (g)	NA	NA	NA	NA NA	NA	NA NA	NA	NA NA	NA	NA	0.15 U	NA
sec Butylbenzene						NA	NA.	NA.	NA NA	- NA	NA NA	INA	NA:	NA .	. NA	NA NA	
tert-Butylbenzene						NA NA	NA	NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA	NA
Toluene	12	f fire			180	NA .	NA	NA	-€ S. NA	NA NA	NA NA	NA -	NA	NA NA	AM	- U-15_U	NA .
HYDROCARBONS (mg/kg)																	
NWTPH-HCID																	
Gasoline		l		80.000	110	20 U	20 U	NA	NA	NA	NA	20 U	20 U	20 U	20 U	1100	20 U
Kerosene						- NA	NA .		NA.		NA NA	NA I		NA.	NA NA	NA NA	NA.
Diesel		-				66	25 U	NA	NA	NA	NA	25 U	25 U	25 U		790	25 U
Lübe Oil				0.9		98	50 Ú	NA NA	NA I	. NA	NA	50 Ü	50 U	50 U	= 50 ∪	50 U	50 U
NWTPH-Dx (mg/kg)												1					
TPH-Diesel Range						NA	NA	5.6 U	56	5.6 U	6.4	NA	NA	NA	NA	280	NA
TPH-Kerosene Bange						NA NA	NA.	NA NA	NA.	NA:	NA S	NA NA	NA NA	NA I	NA .	NA L	NA.
TPH-Motor Oil Range					**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)																	
TPH-Gasoline Range	_			80,000	110	NA	NA	5.1 U	5.0 U	5.0 U	NA	NA NA	NA.	NA	NA	NA	NA
11 71 Gasonio Tiango				00,000	,,,	1171	14/	0.1 0	0.0 0	0.00	102	100	11/4	11/0	740	IVA.	11/4
PRIORITY POLLUTANT																	
METALS (mg/kg)												1					
Arsenic (7060)	29	5 (j)	8.00			NA	NA.	NA	NA	NA	NA	, NA	NANA	NA NA	NA NA	6 U	NA
Chronium (6010)	38	23.1			-	N/A	NA		NA .		NA .	NA	NA NA	NA NA	N/A	20.2	NA
Copper (6010)		19.1	rest			NA	NA	NA	18.1	17.8	NA	NA NA	NA	NA	NA	19.3	NA
Lead (7421) Nickel (6010)	130	21.4	750 		30	- NA	NA.	NA NA	NA.		NA NA	NA NA	NA.	NA NA	NA NA	5	NA NA
Zinc (6010)	12,000	60.2				NA NA	NA NA C		NA <b>52,9</b>	NA 54.7	NA NA	NA NA	NA NA	NA NA	NA NA	23 56	NA NA
Env. MCV	LAND	99.67,13.	MECHANICAL CONTRACTOR			146		140	94,9		197	130	A PARTY OF THE PAR	IVA.	14/5		
Cadmium (6010)	8					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2 U	NA
CONTRACTOR CONTRACTOR			66 (1 <b>3</b> - 1 1 1 1		4-6-	NA	- NA	NA .	NA.		NA NA	. NA	NA.	NA	NA NA	0.05 U	NA.
Commission Control Con											The second secon					The same of the sa	

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TABLE C-6b Page 3 of 24

						5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	5-5.5	CF.	CF	CF	° CF	ĊF .	CF
			SCREENING CRITERIA								•		*	*			
_				ed Concentration								1					
		Site-	Soil Ingestion, Dermal	Volatilization to								1					
	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB8 (3.5-5.0)	LB8(5-6.2)	LB15 (5-6.5)	LB16 (5-6.5)	LB20 (2.5-4.0)	LB24 (2.5-4.0)	LB1(11-12.5)	LB1(15.5-16.5)	LB2(12-13.5)	LB2(18.5-19.5)	LB3(12-13.5)	LB3(17-18)
Laboratory Identification: _	PRGs	Background	Excavation	1		Q650AH	Q650AI	R923O	R923AZ	R923AJ	S057A	Q650P	Q650Q	Q650S	Q650T	Q650V	Q650X
Date Collected:	DAF=20		Worker	Occupational	Occupational	10/24/96	10/24/96	03/10/97	03/12/97	03/11/97	03/21/97	10/23/96	10/23/96	10/23/96	10/23/96	10/23/96	10/23/96
BETX (mg/kg)																	
EPA Method SW8021B																	
Benzene	0.03		9400	48	0.052	NA	NA	0.057 U	0.057 U	0.057 U	NA NA	NA.	NA	NA	NA	NA	NA
Ethylbenzene	13			7 (X 12 - 15 - 15 - 15 - 15 - 15 - 15 - 15 -		NA=	NA	0.057 U	0.057 U	0,057 U	NA NA	NA NA	NA NA	NA.	NA NA	- NA	NA.
Toluene	12		-		180	NA	N/A	0.057 U	0.057 U	0.057 U	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	210			100	100	NA NA	NA NA	NA.	NA	NA .	NA NA	NA.	NA	NA .	NA NA	-NA	NA NA
m,p-Xylene	210 (g)				-	NA	NA	0.057 U	0.057 U	0.057 U	NA	NA.	NA	NA	NA	NA	NA
o-Xylene	210 (g)				100 (g)	- NA	- NA	0.057 W	0.057 U	0.057 U	NA.	NA.	NA NA	NA NA	NA NA	NA NA	NA.
DIOXINS AND FURANS (ng/kg)		_				NA	NA.	NA.	NA	NA	NA	NA.	NA	NA	NA	NA	NA
TOTAL TEX						IVA	NA.	JVM	INA	INA	INA	I NA	IVA	INA	INA	IVA	IVA

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						CF	CF	CF ·	CF	CF	CF (	CF -	CF	CF	CF	CF	CF
		-	SCREENING CRITERIA							-							
				ed Concentration	18	]											
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to												
Sample Identification: Laboratory Identification:		Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB4(12-13.5)	LB4(17-18)	LB6(12-13.5)	LB6(17-18)	LB7(12-13.5)	LB7(17-18)	LB10(6.5-8.0)	LB11 (12.5-14.2)		LB12 (13,2-14.0)	LB12 (15-16)	LB13 (12.5-14)
Date Collected:		Background	Excavation Worker	Occupational	Occupational	Q650AS 10/25/96	Q650AT 10/25/96	Q650AE 10/23/96	Q650AF 10/23/96	Q650AW 10/25/96	Q650AX 10/25/96	Q650AM 10/24/96	R923C	R923D 03/10/97	R923F	R923G	R923I
· · · · · · · · · · · · · · · · · · ·	i DAI-LO	<del>                                     </del>	TYONG	Occupational	Cocopational	10/20/80	10/23/30	10/23/90	10/23/96	10/25/90	10/20/96	10/24/96	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97
SEMIVOLATILES (mg/kg) EPA Method SW8270				l													
2.6-Dinitrotoluene	0.0007	_	_	l		NA.	NA	0.43 U									
2 Methylnaphthalene	84 (b)		C1977, ON 1891 OF 1891	-		NA NA			NA NA	NANA	NA NA	NA NA	NA NA	NA NA	0.43 U	0.42 U	0.62 U
Acenaphthene	570		7.54 HEAV 1879 IN THE COLUMN		The second second	l NA	NA.	0.087 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA	0.085 U 0.085 U	0.085 U 0.085 U	<b>0.27</b> 0.12 ∪
Acenaphibylene	84 (b)					NA.					NA NA			NA NA	0.085 U		
Anthracene	12,000					NA	NA	0.087 U	NA	NA	NA	NA	NA	NA	0.085 U		0.12 U
Benzo(a)anthracene	2 2	1000	590	1.0	FILIL	NA.	NA.	0.087 U	NA NA	NA.	NA NA	NA.	NA	NA.	0.085 U		
Benzo(a)pyrene	8		59	DV NAMED CONTRACTOR AND ADDRESS.		NA	NA	0.087 U	NA.	NA	NA NA	NA	NA	NA	0.085 U	0.085 U	0.12 U
Benzo(b) fluoranthene				PALATED.		,NA			NA	NA.	NA NA	NA.	NA-	- NA	0.085 U	0.085 U	0.12_U
Benzo(g,h,i)perylene	84 (b) 49					NA	NA	0.087 U	NA	NA	NA	NA	NA NA	NA	0.085 U	0.085 ⊔	0.12 U
Benzo(k)fluoranthene bis(2-Ethylhexyl)phthalate	49 3600 (c)		5900			NA NA	NA NA		NA 1	NA NA	" NA	NA NA	NA				6 0.12 ti 🦠
Butylbenzylphihalate	930					NA NA	NA NA	0.087 U 0.087 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.12	0.27	0.12 U
Carbazole	0.6		-			NA NA	NA.	0.087 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.085 U 0.085 U	0.085 U 0.085 U	0.12 U 0.42
Chrysene	160		59,000			NA NA	NA			NA NA		NA		NA.	0.085 U		
Dibenz(a,h)anthracene	2		59		E-19-1-Mar. 1981.1 111-1111	NA	NA	0.087 U	NA	NA	NA	NA	NA	NA	0.085 U	0.085 U	0.12 U
D benzofuran		1. 图像是		海顶型船		NA.			- NA	NA	NA .	NA	NÀ	NA NA	0.085 U		
Diethylphthalate	3600 (c)	FRACTO PERSONNEL PROPERTIES				NA	NA NA	0.087 U	NANA	NA	NA	NA	NA	NA	0.085 U	0.085 U	0.12 U
Dimethylphthalate	3600 (c)					NA.	NA.		NA NA	NA .	NA.	NA		- NA	0.085 U	0.095 U	0.12 U
Di-n-Butylphthalate Di-n-Octyl phthalate	2300 10,000		5.485-51-0			NA NA	NA NA	0.087 U	NA	NA .	NA	NA	NA	NA	0.085 U	0.085 U	0.12 U
Fluoranthene	4300					NA NA	NA NA	0.087 U 0.087 U	2 NA NA	NA NA	→ NA 🔄			NA	0.085 U	0.085 U	
Floorene	560					NA NA	NA.	0.087 U		NA NA	NA NA	NA NA	NA NA	NA NA	0.085 U 0.085 U	0.1 0.085 U	0.12 U 0.12 U
Hexachloroethane	0.5			_		NA.	NA.	0.17 U	NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.17 U	0.085 U 0.17 U	0.12 U 0.25 U
Indeno(1,2,3-cd)pyrene	14		590			NA .		0.087 U	NA.	NA NA	NA NA	NA NA		NA NA	0.085 U	0.085 U	0.12 U
Naphthalene	84		20,000		15	NA	NA	0.087 U	NA	NA	NA	NA	NA	NA	0.085 U	0.085 U	0.84
Pentachlorophenol	0.03	a				NA ,	NA			NA NA	" NA"	NA.	NA:	NA	0.43 U	0.42 U	0.62 0
Phenanthrene	84 (b)					NA	NA	0.087 U	NA	NA	NA	NA	NA NA	NA NA	0.085 U	0.085 U	0.12 U
Pyrene	4200					NA.	NĄ	0.087 U	NA NA	NA -	NA.	NA.	NA	NA _	0.085 U	0.12	0.12 U
SEMIVOLATILES (mg/kg)																	
EPA Method SW8270SIM																	
Acenaphthene	570			55.0°		NA	NA	NA	NA	NA	NA	NA	0.0087 UJ	0.0083 UJ	NA	NA NA	NA
Acenaphthylene Anthracene	84 (b) 12,000					NA			NA.	- NA	NA	N/A	0.0087 UJ	0.0083 UJ		- NA	NA .
Benzo(a)anthracere	12,000		 - 590			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA 60a	0.0087 UJ 0.0087 UJ	0.0083 U	NA NA	NA NA	NA
Benzo(a)pyrene	8		59		71.16425	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0087 UJ	0.03 J 0.028 J	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	5					NA.	NA.		NA NA	NA.		NA NA	0.0087 UJ	0.026 J	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)					NA	NA	NA	NA	NA	NA	NA	0.0087 UJ	0.016 J	NA	NA	NA
Benzo(k)fluoranthene	49		5900			NA.			NA	NA	NA.	NA.	0.0087 UJ	0.023 J	NA NA	NA NA	TENA
Chrysene	160		59,000	-		NA	NA NA	NA	NA	NA	NA	NA	0.0087 UJ	0.032 J	NA	NA	NA
Dipenz(a,tr)anthracene	2		59			NA.	NA.	NA.	NA.	e NA	- NA -	- NA		0.0083 UJ	NA NA	NA.	NA
Fluorantherie Fluorene	4300			-		NA	NA	NA	NA	NA NA	NA	NA.	0.0096 J	0.055 J	NA	NA	NA
Indeno(1,2,3-cd)pyrene	560 14		590			NA NA	NA.		NA NA	NA NA	NA	NA.	0:0087 UJ		NA	NA	NA.
Naphthalene	14 15 84	-	20,000		The second second second	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0087 UJ 1.4 J	0.014 J 0.0083 UJ	NA NA	NA	NA NA
Phenanthrene	84 (b)				De la constantina della constantina della consta	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0087 UJ	0.026 J	NA	NA NA	NA NA
Pyrene	4200					NA.			NA NA	NA NA	NA NA	NA NA	0.0087 U.J	0.026 J			
							No. William Cold Miles		- Alexandra	The state of the s	manus 1 April Child Communication			REPARE NO.	CONTRACTOR CONTRACTOR OF		-07-GDERY SEE BY
CHLORINATED PHENOLS (mg/kg	) [	ĺ	Ĭ	í	1												
Method 8040/8270SIM		ļ	ŀ	I	L												
Pentachlorophenol	0.03	i		- 1	⊦	25	2.6	0.008 U	0.013	0.0099	0.0082 U	0.0044	0.035	0.015	0.028	0.091	79
1	ı	ı	1	ı	ı												

Page 4 of 24

TABLE C-6b Page 5 of 24

						CF	CF .	CF:	CF	CF:	CF	CF	CF	CF : '	· · · · · · · · · · · · · · · · · · ·	CF	CF
		-	CREENING CRITERIA			<del> </del>							_				
				ed Concentration													
Sample Identification:	EPA Region 9	Site- Specific	Soil Ingestion, Dermail Contact, and Inhalation	Votatilization to Outdoor Air	Leaching to Groundwater	LB4(12-13.5)	LB4(17-18)	LB6(12-13.5)	LB6(17-18)	LB7(12-13.5)	LB7(17-18)	LB10(6.5-8.0)	LB11 (12.5-14.2)	LB44 (47 47 6)	LB12 (13.2-14.0)	LB12 (15-16)	D40 (40 E 44)
Laboratory Identification:	PRGs	Background	Excavation	Outdoor Air	Groundwater	Q650AS	Q650AT	Q650AE	Q650AF	Q650AW	Q650AX	Q650AM	R923C	R923D	R923F	R923G	LB13 (12.5-14) R923I
Date Collected:	DAF=20	1	Worker	Occupational	Occupational	10/25/96	10/25/96	10/23/96	10/23/96	10/25/96	10/25/96	10/24/96	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97
VOLATILES (mg/kg)																	
EPA Method SW8260					1												
1,2,4-Trimethylbenzene			40,000	790	55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA
1,2 Dibromosthane		-	7.1	1.7	0.000059	ŊÄ	NA	NA	NA NA	NA-	NA:	NA.	. NA		NA =	. NA	NA NA
1,3,5-Trimethylbenzene 2-Butanone	reserva	-	40,000		12	NA NA	NA NA	NA 0.0064 U	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA 0.74 U
4-Isopropyltoluene	12 (a)		10			l NA	NA NA	D.U.IS4 U.I	NA NA	NA NA	NA NA	NA NA	1.5. U NA	NA NA	NA NA	NA NA	0.74 U
Acetone	16					NA NA	NA .	0011 U	NA:	NA NA	NA NA	NA.	1.5 U	NA NA	- NA	NA NA	0.74 U
Benzene	0.03		9400	48	0.052	NA NA	NA	0.0013 U	NA	NA	NA	NA	0.31 U	NA	NA	NA	0.15 U
Carbon Distifide	32.		d			NA	NA NA	0.0013 U	NA.		NA				NA :	NA .	0.15 U
Ethylbenzene	13			-		NA	NA	0.0013 U	NA	NA	NA	NA NA	0,81 M	NA	NA	NA	0.38
Isopropylbenzene m,p-Xylene	210 (g)					NA NA	NA NA	NA 0.0013 U	NA NA	NA NA	NA NA	NA NA	NA 1.9 M	NA NA	NA NA	NA NA	NA 2
Methyl lodide	210 (g)					NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA		NA NA
Methyl tert-butyl ether	CONTRACTOR OF THE STATE OF THE			720	0.30	NA	NA	NA	NA	NA NA	NA	NA.	NA	NA	NA NA	NA.	NA NA
Naphthalene	84		20,000	21.00	15	NA NA	NA	NA:	NA	NA NA	NA	NA NA	NA:	NA.	NA.	NA'	` NA
n-Butylbenzene				and the second		NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene o-Xylene	210 (g)		****		100 (g)	NA NA	NA NA	NA 0.0013 U	NA :	NA NA	NA NA	NA NA	NA 0.49 M	NA NA	NA NA	NA NA	NA
sec-Butylbenzene	210 (g)				100 (g)	NA NA	NA NA	0.0013 U	NA NA		NA NA	NA NA			NA NA	NA NA	1.4 M NA
tert-Butvlbenzene	a town more of a surface			-		NA.	NA NA	NA	NA.	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
Toluene	12				180	NA.	NA .	0 0013 U	-NA	NA.		NA	0.311.0	NA =	=NA		
HYDROCARBONS (mg/kg)																	
NWTPH-HCID																	
Gasoline				80,000	110	20 U	20 U	20 U	20 U		20 U	20 L		NA_	NA	NA	NA
Kerosene				3/10/10		NA .	NA 25 U	NA 25 U	NA 57		NA 25 U	NA 25 L		NA NA	NA NA	NA	NA NA
Diesel Eube Oil						25 U			120	25 U 50 U				NA NA	NA NA	NA NA	NA NA
		PART OF THE PART OF			200 200 000 C 200 C 200 C		- VVIIV		-				Colore III dans				
NWTPH-Dx (mg/kg) TPH-Diesel Range		_			.	NA	NA	NA	NA	NA	NA	NA	1100	43	6.3 U	6.4 U	1500
TPH Kerosene Range			-	-		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA 3	- NA	NA.	NA.
TPH-Motor Oil Range		-				NA NA	NA	NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA	NA NA
NWTPH-G (mg/kg)																	
TPH-Gasoline Bange				80,000	110	NA	NA	NA	NA	NA	NA	NA	NA	210	5.0 U	5.0 U	NA
The same range				55,555											5.0 0	0.00	147
PRIORITY POLLUTANT																	
METALS (mg/kg)		i															
Arsenic (7060)	29 38	5 (j)				NA	NA NA	6 U	NA	NA	NA	NA	NA NA	NA	NA NA	NA	NA
Chromium (6010) Copper (6010)	38	23.1 19.1				NA NA		23.3 21.6	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Lead (7421)		0	750		30 👢 🖑	NA NA	NA.	21.0	NA NA	NA NA	NA NA	NA.	NA NA		NA NA	NA NA	NA NA
Nickel (6010)	130	21.4				NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (6010)	12,000	60.2			-4.6	NA NA	= NA	59.7	NA.	NA.	NA NA	E ≗ NA -	NA	NA.	NA,	NA_	NA .
	_		l														-
Cadmium (6010)	8					NA.	NA NA	0.3 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Mercury (7471)						NA -	, INA	0,00,0	THE WALL	NA	IVA	NA	Marie Calledon	NAME OF TAXABLE	NA.	NA	NA NA
	,	ı	'	'	'												

TABLE C-6b Page 6 of 24

						CF	CF.	CF	CF.	CF	CF .	CF	CF	CF CF	GF CF	CF/1	° CF
-			CREENING CRITERIA														
-			Risk-Bas	ed Concentration	s												
		Site-	Soil Ingestion, Dermai	Volatilization to	Leaching to												
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB4(12-13.5)	LB4(17-18)	LB6(12-13.5)	LB6(17-18)	LB7(12-13.5)	LB7(17-18)		LB11 (12.5-14.2)		LB12 (13.2-14.0)	LB12 (15-16)	LB13 (12.5-14)
Laboratory Identification:	PRGs	Background	Excavation			Q650AS	Q650AT	Q650AE	Q650AF	Q650AW	Q650AX	Q650AM	R923C	R923D	R923F	R923G	R9231
Date Collected:	DAF=20		Worker	Occupational	Occupational	10/25/96	10/25/96	10/23/96	10/23/96	10/25/96	10/25/96	10/24/96	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97
BETX (mg/kg)					l i												
EPA Method SW8021B																	
Benzene	0.03		9400	48	0.052	NA	NA	NA.	NA	NA .	NA NA	NA NA	NA .	0.064 U	0.069 U	0.066 U	NA
Ethylbenzene	13					NA	NA NA	NA NA	NA	NA NA	NA NA	NA.	NA	0.81 ∪	0,069 U	0.066 U	NA.
Toluene	12				180	NA NA	NA	NA NA	NA	NA	NA	NA NA	NA	0.064 U	0.069 U		
Xylenes, Total	210				100	NA.	NA	NA.	NA.	NA	NA	NA NA	NA .	NA	NA NA		
m,p-Xylene	210 (g)	**	wir			NA NA	NA	NA	NA.	NA	NA NA	NA	NA NA	0.064 U	0.069 U		
o-Xylene	210 (g)				100 (g)	NA	NA	i NA	NA.	NĀ.	NA.	NA		2.3	0.069 U	0.066 U	NA
DIÓXINS AND FURANS (ng/kg)																	
Total TEQ				i		2132.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-6b Page 7 of 24

						CF	CF	CF	CF	CF	CF CF	. (in the contract of	CF	CF	CF :	CF	CF
			SCREENING CRITERIA			<del> </del>											· · · · · · · · · · · · · · · · · · ·
				ed Concentration		]											
Sample Identification	EPA Region 9	Site- Specific	Soil Ingestion, Dermal	Volatilization to Outdoor Air	Leaching to Groundwater	1040 (45 40 5)	1044/405440	15444040	104	1545446544	1545405430	1.040/2.4.44	LS7 (27.5-29.0)				
Sample identification Laboratory Identification		Background	Contact, and Inhalation Excavation	Outdoor Air	Groundwater	LB13 (15-16.5) R923J	LB14 (12.5-14.0) Fl923M	LB14 (18-19) R923N	LB15 (7.5-9.0) H923P	LB15 (12.5-14) R923Q	LB15 (16.5-17.3) R923R	LB16 (7.5-9.0) R923BA	Dup of LB16 (7.5-9.0) R923T	LB16 (21-22.5) R923BB	LB17 (7.5-9.0) R923Z	LB17 (10-11.5) R923AA	LB17 (18-19.5) R923AB
Date Collected		Luckground	Worker	Occupational	Occupational	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97	03/12/97	03/12/97	03/12/97	03/11/97	03/11/97	03/11/97
SEMIVOLATILES (mg/kg)		<del>                                     </del>		<del> </del>	<del>1                                    </del>											00,1100	
EPA Method SW8270			•														
2,6-Dinitrotoluene	0.0007		**			0.43 L	J 2.6 U	0.43 U	NA	NA	NA	NA	NA	NA	0.42 U	0.42 U	0.44 U
2 Methylnaphthalene	84 (b)					0.085 L		0.086 U	. NA	NA NA	· · · · · · · · · · · · · · · · · · ·	NA	- NA	NA.	0.084 U	- 0.084 U	0.13
Acenaphthene	570	-				0.085 L			NA.	NA	NA NA	NA	NA NA	NA	0.084 U		0.088 U
Acenaphthylene	84 (b)					0.085					- NA		, NA	NA:	0.084 U		
Anthracene Benzo(a)anthracene	12,000 2		590	-		0.085 U			NA NA	NA NA	NA .	NA	NA	NA NA	0.084 U	0.084 U	0.088 U
Benzo(a)pyrene	8		59			0.085 L		0.086 U	NA NA	NA NA	NA NA	NA NA	NA NA	* NA NA	0.084 U 0.084 U	0.084 U	
Benzo(b)fluoranthene	5		39	a de la se		0.085 L					NA NA	NA NA	NA NA	NA NA	0.084 U	0.084 U	0.11 - 0.088 U
Benzo(g,h,i)perylene	84 (b)			de radio sole radio entre		0.085 U		0.086 U	NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.084 U	0.084 U	0.088 U
Benzo(k)fluoranthene	49		5900			0.085 U			NA.			NA .	NA.	NA.			
bis(2-Ethylhexyl)phthalate	3600 (c)					0.085 L	0.51 U	0.086 U	NA	NA	NA	NA	NA	NA	0.084 U	0.084 U	0.48
Butylbenzy/phthalate.	930					0.085 1		0.086 U	NA NA					NA.	0.084 U	0.084_U	0.088 U
Carbazole	0.6	-				0.085 L		0.086 U	NA	NA	NA	NA NA	NA	NA	0.084 U	0.084 U	0.088 U
Chrysene	160		59,000			0.085 L		0.086 U	NA NA		NA NA	NA.	NA NA	. NA	0.084 . U		
Dibenz(a,h)anthracene Dibenzofuran	2		59	- 		0.085 L		0.086 U	NA NA	NA	NA	NA	NA	NA NA	0.084 U	0.084 U	0.088 U
Diethylohthalate	3600 (c)		<u>.</u>			0.085 L 0.085 U		0.086 U 0.086 U	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	0:084 U 0.084 U	0.084 U 0.084 U	0.088 Ü
Dimethylphthalate	3600 (c)					0.085 U		0.086 U			NA = NA	NA NA	NA NA	NA NA	0.084 U		0.088 U 0.088 U
Di-n-Buty/phthalate	2300					0.085 U		0.086 U	NA NA	NA	NA NA	NA NA	NA NA	NA.	0.084 U	0.084 U	0.088 U
Di-n-Octyl-phthalate	10,000					0.085 U					NA.	NA NA	NA NA	NA.	0.084 U		0.088 U
Fluoranthene	4300	-				0.085 U		0.086 U	NA	NA	NA	NA	NA	NA	0.084 U	0.084 U	0.18
Fluorene:	560					0.085 L		0.086 U			NA NA	NA NA	NA.		0.084 U	0.084-U	0.988 U
Hexachloroethane	0.5					0.17 U		0.17 U	NA	NA	NA NA	NA	NA	NA	0.17 U	0.17 U	0.18 U
Indeno(1,2,3-cd)pyrene	14		590			0.085 10			NA NA		Budgetter and the section of the sec	NA NA	E. ADMIDITERED AND CONTRACT SPECIAL	NA NA	0.384 U		
Naphthalene Pentachlorophenol	84 0.03		20,000		15	0.085 U 6,43 U		0.086 U	NA NA	NA NA	NA NA	NA NA	NA	NA NA	0.084 U 0.42 U	0.084 U	0.088 U
Phenanthrene	84 (b)	201 Carl Will Con 1995				0.085 U		0.086 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.084 U	0.42 U 0.084 U	0.44 U 0.18
Pyrene	4200					0.085 U			NA NA		NA.	NA NA	NA NA	NA NA	0.084 U		0.16
SEMIVOLATILES (mg/kg)						-											THE RESERVE AND ADDRESS OF THE PARTY OF THE
EPA Method SW8270SIM																	
Acenaphthene	570			-		NA	NA	NA	0.0086 L		0.0092 L		0.0083 U	0.0094	NA	NA NA	NA
Acenaphinylene	84 (b)					, NA		NA _	0.00861		0.061 J			0.022	NA.	NA	
Anthracene Benzo(a)anthracene	12,000	-	590			NA NA	NA NA	NA NA	0.0086 U		0.64 J 0.76 J	0.0083 U	0.0083 U	0.1	NA	NA	NA
Benzo(a)pyrene	8		59			NA NA	NA NA	NA NA	0.0086 U		0.76 J	0.0083 U 0.0083 U	0.0083 U 0.0083 U	0,25 0,23	NA NA	NA NA	NA NA
Benzo(b)fluoranthène	5	3.045.24	39			NA NA	NA NA		0.0086 L		0.65 J		0.0083 U	0.23		NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)					NA	NA	NA	0.0086 L		0.26 J	0.0083 U	0.0083 U	0.09	NA.	NA	NA NA
Benzo(kifluoranthene	49		5900		70 W	NA NA	NA.	NA NA	0.0086-L		0.46 3		0.0083 U	0.17	NA.	NA.	NA NA
Chrysene	160		59,000			NA	NA	NA	0.0086 L	0.039	0.83 J	0.0083 U	0.0083 U	0.24	NA	NA	NA
Diberiz(a,fi)arithracene	2		59			NA.	NA.	NA.	0.0086 L				0.0083 U	0.022	NA	NA .	NA.
Fluoranthene	4300					NA	NA	NA	0.0086 L		1 J	0.0083 U	0.0083 U	0.35	NA	NA	NA NA
Fluorene:	560		500			NA.		. NA	0.0086 (		0.017 J	0.0083 U	0.0093 U	0.011	NA	NA_ <	NA
Indeno(1,2,3-cd)pyrene Naphthalene	14		590 20,000		15	NA NA	NA NA	NA NA	0.0086 L		0.25 J 0.0092 U	0.0083 U	0.0083 U	0.09	NA NA	NA NA	NA NA
Phenanthrene	84 (b)		20,000	-	19	NA NA	NA NA	NA NA	0.0086 L		0.0092 U 0.48 J	U 6800.0 U 6800.0	0.0083 U 0.0083 U	0.01 0.21	NA NA	NA NA	NA NA
Pyrene	4200	7 7 4				NA NA	NA NA	NA NA	0.0086 L		0.48 J	0.0083 U	0.0083 U	0.21	NA NA		NA NA
		Control of the Contro				1950 Z000 Z070 Z070 Z070 Z070 Z070 Z070 Z0			9.0000	4.00-10		ar as HE PERSON NAMED IN	704111111111111111111111111111111111111		inc.		
CHLORINATED PHENOLS (mg/kg	)		1	ŀ	' 1												
Method 8040/8270SIM		l i		ſ	L												
Pentachlorophenol	0.03	**			[	6.7	180	0.85	0.0081 U	0.071	0.14	0.0078 U	0.0078 U	0.0087 U	0.0079 ⊔	0.008 U	0.0083 U
I		<b>!</b>	1	- 1	1												

Page 8 of 24

						CF	CF	CF	CF	CF "	DESCRIPTION OF	NO SICHE LA	de Tr <b>CF</b>	CF	CF	CF	CF
			SCREENING CRITERIA											***************************************			
Sample Identification: Laboratory Identification: Date Collected:	EPA Region 9 PRGs DAF=20	Site- Specific Background	Risk-Bas Soil Ingestion, Dermal Contact, and inhalation Excavation Worker	ed Concentration Volatilization to Outdoor Air Occupational	Leaching to Groundwater	LB13 (15-16.5) R923J 03/10/97	LB14 (12.5-14.0) R923M 03/10/97	LB14 (18-19) R923N 03/10/97	LB15 (7.5-9.0) R923P 03/10/97	LB15 (12.5-14) R923Q 03/10/97	LB15 (16.5-17.3) R923R 03/10/97	LB16 (7.5-9.0) [ R923BA 03/12/97	LS7 (27.5-29.0) Dup of LB16 (7.5-9.0) R923T 03/12/97	LB16 (21-22.5) R923BB 03/12/97	LB17 (7.5-9.0) R923Z 03/11/97	LB17 (10-11.5) R923AA 03/11/97	LB17 (18-19.5) R923AB 03/11/97
VOLATILES (mg/kg)																	
EPA Method SW8260 1,2,4-Trimethylbenzene	_		40.000	790	55	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA
1,2-Dibromoethane		1 10 A 15	71	1.7	0.000059	. NA	NA.	- NA=	NA.	NA.	NA NA	NA	" NA	NA .	- NA		NA.
1,3,5-Trimethylbenzene			40,000		12	NA	NA .	NA	NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA
2-Butanene 4-Isopropyltoluene	12 (a)				-	0.061: U NA	1.4 U NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0061 U NA	NA NA
Acelone	16					0,18	1,4 U		, NA		NA .	NA.	NA NA	NA.	NA.	0.0082 U	
Benzene	0.03		9400	48	0.052	0.012 U	0.29 U	NA	NA	NA	NA	NA	NA	NA	NA	0.0012 U	NA
Carbon Disulfide Ethylbenzene	32 13					0.012 U 0.012 U	0.29 U 9.9	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0012 U 0.0012 U	NA NA
Isopropylbenzene	ia Elemente de la companya de la companya de la companya de la companya de la companya de la companya de la compa					NA NA	9.9 NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0012 U	NA NA
m,p-Xylene	210 (g)					0.033 M	40	NA	NA	NA	NA	NA	NA	NA	NA	0.0012 U	NA
Methy lodide				32 (37 )		NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA	NA NA	NA NA	- NA	NA
Methyl tert-butyl ether Naphthalene	81		20,000	720	0.30 15	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
n-Butylbenzene	-					NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA.	NA NA
n-Propylbenzene						NA .	NA.	NA	NA .		NA NA	NA NA		NA .	NA.	,NA	NA
o-Xylene sec-Butylbenzene	210 (g)				100 (g)	0.027 M NA	19 M NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.0012 U	NA
tert-Butylbenzene		-	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	12				180	0.012 U	0.29 ⊎	- NA	NA.	NA-		NA 11		-NA	NA NA	0.0012=U	NA.
HYDROCARBONS (mg/kg)																	
NWTPH-HCID																	
Gasoline Kerosene	-			80,000	110	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Diesel		**				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil				的复数医原液		NA -	- NA	NA	, NA	. NA	NA.	NA .	NA -	NA	NA NA	NA NA	NA
NWTPH-Dx (mg/kg)																	
TPH-Diesel Range TPH-Kerosene Range						70 NA	4700 NA	24 NA	6.5 U NA	6.4 U NA	39 NA	6.3 U NA	6.2 U NA	19 NA	6.4 U NA	6.4 U	38 NA
TPH-Motor Oil Range		-				NA	NA	NA	NA	NA	NA NA	NA	NA NA	NA	NA NA	NA	NA NA
NWTPH-G (mg/kg)																	
TPH-Gasoline Range				90,000	110	NA	NA	5.0 ⊔	4.9 ∪	5.1 U	4.9 U	5.1 U	5.0 U	4.9 U	5.0 U	NA	5.0 U
PRIORITY POLLUTANT																	
METALS (mg/kg)					-												
Arsenic (7060) Chromium (6010)	29 38	5 (j) 23.1				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA S	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Copper (6010)		19.1	-	-		NA	NA NA	NA	NA NA	NA NA	NA NA	17.3	16.9	18.1	16.0	17.9	18.8
Lead (7421)		9	750		30	NA NA	NA.	NA.	NA -	NA NA	NA NA	NA	NA	NA NA	NA NA	ŇA	NA
Nickel (6010) Zine (6010)	130 12.000	21.4 60:2				NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA 48.7	NA 50.2	NA 55.9	NA 49.8	NA <b>51.5</b>	NA 51, <b>4</b> :
ZIT(2(0U1U):	12,000	DV-Z				NA	PIA.	N/A	PIA	INA	NA.	40.7		55.9	49.0	31.0	01.9
Cadmium (6010)	8					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471) =						NA NA	NA NA	NA:	NA	NA	NA NA	NA NA	NA NA	NA	NA .	NA	NA NA
ſ	- 1		Į	- 1	ı												

7/19/05 \\Edmdata\wproc\231\009\132\Phiii Ri 071905\Phiii Ri Rpt\_App C PHii >3 Landau Associates

DETECTED ANALYTICAL RESULTS IN SOIL:

Page 9 of 24

						CF	CF .	CF	CF	CF	CF	CF	CF 10 C	CF	<b>CF</b>	CF C	······································
			SCREENING CRITERIA							····							
•			Risk-Bas	ed Concentration	is	]											
		Site-											LS7 (27.5-29.0)				
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB13 (15-16.5)	LB14 (12.5-14.0)	LB14 (18-19)	LB15 (7.5-9.0)	LB15 (12.5-14)	LB15 (16.5-17.3)			LB16 (21-22.5)	LB17 (7.5-9.0)	LB17 (10-11.5)	LB17 (18-19.5)
Laboratory Identification:	PRGs	Background	Excavation			R923J	R923M	R923N	R923P	R923Q	R923R	R923BA	R923T	R923BB	R923Z	R923AA	R923AB
Date Collected:	DAF=20		Worker	Occupational	Occupational	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97	03/10/97	03/12/97	03/12/97	03/12/97	03/11/97	03/11/97	03/11/97
BETX (mg/kg)																	
EPA Method SW8021B					l												
Benzene	0.03		9400	48	0.052	NA	NA	0.064 U	0.068 (	J 0.069 U	0.068 U	0.061 U	0.062 U	0.064	J 0.066 L	NA NA	0.068 U
Ethylbenzene	13			Part description	1-127-05-25	NA NA	NA NA	0.064 U	0.068 (	J 0.069 U	0.068 U	0.061 U	0.062 U	0.064 - 1	J 0,066 L	- NA	U 880.0
Toluene	12				180	NA NA	NA	0.064 U	0.068 L	J 0.069 U	0.068 U	0.061 U	0.062 U	0.064	J 0.066 L	NA.	0.068 U
Xylenes, Total	210				100	NA NA	NA.	NA .	NA	. NA	NA NA	NA.	NA -	NA.	NA NA	NA.	NA.
m,p-Xylene	210 (g)					NA NA	NA NA	0.064 U	0.068 L		0.068 U	0.061 U	0.062 U	0.064 (	J 0.066 L	NA	0.068 U
o Xylene	210 (g)				100 (g)	NA.	NA.	0.064 U	0.068 L	0.069 U	0.068 U	0.061 U	0.062 U	0.064 (	J 0.066 L	NA	0,068 U
			l		l												
DIOXINS AND FURANS (ng/kg)																	
Total TEQ						NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

						CF	CF	CF	CF	CF	· · · · · · · · · · · · · · · · · · ·	CF .	CF CF	CF	CF	CF	CF
			SCREENING CRITERIA														
				sed Concentratio													
		Site-	Soil Ingestion, Dermal														
Sample Identification:		Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB18 (7.5-9.0)	LB18 (18-19.5)	LB19 (7.5-9.0)				LB21 (7.5-9.0)	LB21 (15.4-16.4)	LB22 (7.5-9.0)	LB22 (16.8-17.3)		LB23 (16.7-17.7)
Laboratory Identification: Date Collected:	PRGs DAF=20	Background	Excavation Worker	Occupational	Occupational	R923AD 03/11/97	R923AE 03/11/97	R923AG 03/11/97	R923AH 03/11/97	R923AK 03/11/97	R923AL 03/11/97	H923AN 03/11/97	R923AO 03/11/97	R923AQ 03/11/97	R923AR 03/11/97	R923AT 03/11/97	R923AU 03/11/97
	DAF=20	<del> </del>	Worker	Occupational	Occupational	Ua/TI/8/	U3/11/8/	02/11/97	03/11/87	U3/11/97	U3/11/9/	03/11/97	03/11/9/	U2/11/97	03/11/97	03/11/97	03/11/97
SEMIVOLATILES (mg/kg)			İ			l											
EPA Method SW8270				1													
2,6-Dinitrotoluene 2-Methylnaphthalene	0.0007			L . i		NA NA	NA NA	NA NA	NA NA	0.41 L		NA NA	NA	0.42 U	0.42 U		NA
Acenaphthene	64 (b) 570					NA NA	NA NA	NA NA	NA NA	0.082 L 0.082 L		NA NA	NA NA	0.083 U 0.083 U	0.084 U 0.084 U		NA NA
Aceraphinerie	84 (b)					NA NA	NA NA	NA.	NA NA	0.082 L				0.083 U	0.084 U		NA NA
Anthracene	12.000		-			NA.	NA NA	NA.	NA NA	0.082 U		NA	NA	0.083 U	0.084 U		NA
Benzo(a)anthracene	2		590			NA.	NA.	NA.	NA.	0.082 U		NA.	NA.	0.083 U			NA NA
Benzo(a)pyrene	8		59			NA.	NA	NA	NA	0.082 U		NA	NA	0.083 U	0.084 U		NA
Berizo(b)fluoranthene	10 To 10 To					NA.	NA NA	NA:	NA NA	0.082 U		NA.	NA .	0.083 U			NA .
Benzo(g,h,i)perylene	84 (b)				V-	NA	NA	NA	NA	0.082 U	0.068 U	NA	NA	0.12	0.084 U	NA	NA
Benzo(k)fuoranthene	49		5900		-	NA.	NA.	NA NA		0.082_U	0.068 U	NA.	NA=	0.083 U	0.084 U	- NA	NA NA
bis(2-Ethylhexyl)phthalate	3600 (c)		-	-		NA NA	NA	NA	NA	0.082 U		NA	NA	0.22	0.19	NA NA	NA
Butylpenzylphthalate	930					NA .	NA NA	NA_	NA	0.082 V		The second residence of the se		0.083 U	0.084 U		NA NA
Carbazole	0.6					NA	NA	NA	NA NA	0.082 U		NA NA	NA	0.083 U	0.084 U		NA
Chrysene	160		59,000			NA-	NA .	NA NA	NA.	0.082 U		NA NA	NA NA	0.083 U	0.084° U		NA .
Dibenz(a,h)anthracene Dibenzofuran	2		59			NA NA	NA NA	NA NA	NA NA	0.082 U		NA NA	NA NA	0.083 U	0.084 U		NA NA
Diethylphthalate	3600 (c)					NA.	NA NA	NA.	NA NA	0.082 U		NA NA	NA NA	0.083 U	0.084 U 0.084 U		NA NA
Dimethylphthalate	3600 (c)	-				NA NA	NA.	NA NA	NA NA	0.082 U			NA NA	0.083 U			NA NA
Di-n-Butylphthalate	2300					l NA	NA NA	NA NA	NA NA	0.082 U		NA NA	NA NA	0.083 U	0.084 U		NA
Dian Octyl phthalate	10,000				., 775	NA.	NA.	NA.	NA.	0.082 U		NA :	NA NA	0.089 U			- NA
Fluoranthene	4300					NA.	NA	NA	NA	0.082 U		NA	NA	0.15	0.091	NA	NA
Fluorene	560					- NA	NA"	NA NA	- NA	0.082 U		NA I	NA.	0.083 U	0.084 U	NA NA	NA NA
Hexachloroethane	0.5					NA	NA	NA	NA	0.16 U	0.14 U	NA	NA	0.17 U	0.17 U	NA	NA
Indeno(1.2,3-cd)pyrene	. 14		590		A-67	NA	NA .	NA.	NA NA	0.082 U	0.068 U	NA	ŅĀ	0.083 U	0.084 U		NA NA
Naphthalene	84		20,000		15	NA	NA .	NA.	NA	0.082 U		NA_	NA	0.083 U	0.084 U		NA NA
Pentachlorophenol	0.03					NA.	NA.	NA	NA.	0 41. U		NA.	NA	0.42 (7	0.42 U		NA -
Phenanthrene	84 (b)			-		NA	NA NA	NA	NA	0.082 U		NA	NA NA	0.13	0.084 U	NA	NA
Pyrene	4200					NA	NA.	. NA	NA.	8.082 U	- 0.068 U	NA NA	NA.	0.24	0.13	NA NA	NA.
SEMIVOLATILES (mg/kg)				1													
EPA Method SW8270SIM		;															
Acenaphthene	570	1 1			l i	0.0083 U	0.009 U	0.0088 U	0.012 J	NA	NA	0.009 U	0.0087 U	NA	NA	0.0088 U	0.0088 U
Acenaphthylene	84 (b)	2000				0.0083 U				NA NA		0.009 U		NA NA	NA NA	0.0088 U	
Anthracene	12.000		**	-		0.0083 U	0.0099	0.0088 U		NA	NA	0,009 U	0.0087 U	NA	NA	0.0088 U	0.029
Benzo(a)anthracene	2		590			0.0083 U	0.044	0.0088 U	0.42 J	NA NA	NA.	0.009 U	0.0087-U	NA NA	NA.	0.019	0.094
Benzo(a)pyrene	8		59			0.0083 U	0.042	0.0088 U	0.42 J	NA	NA	0.009 U	0.0087 U	NA	NA	0.026	0.13
Benzo(b)tluoranthehe	5					0.0083 U	0.023	0.0088 U	0.22 J	NA NA	NA .	0:009 U	0.0087 U	NA.		0.021	180.0
Benzo(g,h,i)perylene	84 (b)		**			0.0083 U	0.021	0.0088 U		NA	NA	0.009 U	0.0087 U	NA NA	NA	0.02	0.087
Benzo(k)fluoranthene	49	12.	5900			0.0083 U		0 0088 U		NA NA		0.009 U		NA		-0,02	0.096
Chrysene	160		59,000			0.0083 U	0.039 J	0.0088 U		NA	NA	0.009 U	0.0087 U	NA	NA	0.027 J	0.11 J
Dibenz(a,fr)anthracene	2	*	59		ev ;	0.0083 U	0.009 U	0.0088 U		NA -		C.009 U	0.0087 U	NA *	NA	0,0088 U	0.019
Fluoranthene Fluorene	4300			**		0.0083 U	0.071 J	0.016 J	0.59 J	NA NA	NA NA	0.009 U	0.0087 U	NA NA	NA	0.072 J	0.22 J
Indeno(1,2,3-cd)pyrene	560 14		590			0.0083 U 0.0083 U	0.009 U 0.018	0.0088 U 0.0088 U		NA NA	NA NA	0.009 U 0.009 U	0.0087 U 0.0087 U	NA NA	NA III NA	0.0088 U 0.018	0.0088 U 0.079
Naphthalene	84		20,000	-	15	0.0083 U		0.0088 U				0.009 U		NA NA	NA NA	0.0088 U	0.079
Phenanthrene	84 (b)	No. 100 10 In 1841			THE RESERVE AND ADDRESS.	0.0083 U	0.00 <del>0</del> U	0.0088 U		NA	NA	0.009 U	0.0087 U	NA	NA NA	0.04 J	0.079 J
Pyrene	4200					0:0083-LJ		0.019-1		NA		0.009 U		NA NA	NA NA	0.078 J	
	OFFICE OF STREET, SAME OF STRE				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			The Control of the		THE RESERVE THE PARTY OF THE PA		AND STREET, SALES		CONTROL OF STREET			THE RESERVED
CHLORINATED PHENOLS (mg/kg)	)																
Method 8040/8270SIM																	
Pentachlorophenol	0.03					0.0078 U	0.0084 U	0.0083 U	0.0081 U	0.044	0.0063 U	0.0084 U	0.0081 U	0.0084	0.0079 ∪	0.0082 U	0.011
			i														

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Page 11 of 24

			-			CF	CF	CF	CF.	CF.	CF .	CF .	an sa sa <b>ce</b> as the	ing lings in the	. CF	CF	CF .
			SCREENING CRITERIA			<del> </del>											
		1	Risk-Bas	ed Concentration	าร	1											
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to	1											
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB18 (7.5-9.0)	LB18 (18-19.5)			2) LB20 (7.5-9.0)			LB21 (15.4-16.4)	LB22 (7.5-9.0)	LB22 (16.8-17.3)		LB23 (16.7-17.7)
Laboratory Identification: Date Collected:	PRGs DAF=20	Background	Excavation Worker	0	Occupational	R923AD 03/11/97	R923AE 03/11/97	R923AG 03/11/97	R923AH 03/11/97	R923AK 03/11/97	R923AL 03/11/97	R923AN 03/11/97	R923AO 03/11/97	R923AQ 03/11/97	R923AR 03/11/97	R923AT 03/11/97	R923AU 03/11/97
	DAT=20	ļ	vvorkei	Occupational	Occupational	03/11/97	03/11/97	03/11/97	03/11/97	Ua/11/87	00/11/97	03/11/97	Uar i Irar	02/11/97	03/11/87	03/11/97	03/11/97
VOLATILES (mg/kg)						ĺ											
EPA Method SW8260																	
1,2,4-Trimethylbenzene 1,2-Dibromoethane	-	-	40,000 7.1	790 1.7	55 0.000069	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
1,3,5-Trimethylbenzene			40,000	100 A 100 B 100 A	12	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
2-Butanone			40,000		12	NA NA		NA NA	NA NA		NA NA		NA NA		NA NA	NA NA	NA NA
4-Isopropyltoluene	12 (a)			START AL PROPERTY.		NA NA	NA.	NA.	NA.	NA	NA NA	NA	NA	NA	NA	NA NA	NA
Acelone	16	A T				NA.	NA .	NA.	NA.		NA NA		NA	NA NA			NA NA
Benzene	0.03		9400	48	0.052	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disutifide	32					NA NA	NA .	NA.	NA.	NA"	. NA	NA NA	NA NA	NA	NA.	NA NA	NA NA
Ethylbenzene	13	I				NA NA	NA NA	NA	NA	NA.	NA	NA	NA NA	NA.	NA NA	NA	NA
Isopropylbenzeno		44				NA	NA:	NA NA	NA.		NA.	, NA	NA:	NA .	NA NA	NA:	
m,p-Xylene	210 (g)					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Methyl lodide			2015 <b>.</b> 1150			NA.	NA NA	NA.	NA.	THE REPORT OF THE PARTY OF THE	NA .	NA NA	NA J		NA NA	NA NA	NA NA
Methyl tert-butyl ether Naphthalene	84		20,000	720	0.30 15	NA NA	NA Na	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphfhatene n-Butylbenzene			20.UW			NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
n-Propylbenzene	-					NA NA	NA NA	NA NA	NA NA		NA P	NA NA	NA NA	NA NA	NA.		NA NA
o-Xvlene	210 (g)	- Commenter of the Comm			100 (g)	NA	NA NA	NA NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA	NA
sec-Butylbenzene		E-LANCE S				NA NA	N/A	NA NA	NA		NA NA		NA NA	- NA	NA NA		
tert-Butylbenzene			**	**		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	12				1.30=	, NA	- NA	NA =	NA.	NA NA	NA NA	NA.	NA NA	NA .	NA .	NA NA	i - NA
HYDROCARBONS (mg/kg)																	
NWTPH-HCID																	
Gasoline			-	80,000	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene						NA	NA NA	NA.		.MA		NA.	NA.	ŇΑ	NA .	- NA	
Diesel			The second Control of the Control of			NA.	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil						NA NA	NA NA	ii ii NA	- NA	NA NA	NA.	NA	NA	NA	NA.	NA	NA.
NWTPH-Dx (mg/kg)		1															
TPH-Diesel Range						6.2 U	10	6.6 U	18	6.2 U	5.1 U	6.7 U	6.5 U	11	7.3	6.6 U	6.5 U
TPH-Kerosene Range						NA-	NA.	NA.	NA.	NA II	NA.	/ NA	NA	NA	NA	NA	NA NA
TPH-Motor Oil Range			-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)																	
TPH-Gasoline Range				80.000	110	5.0 U	5.0 U	5.0 U	5.0 L	J 5.0 U	5.1 U	5.1 U	5.0 U	5.0 U	5.0 U	5.0 U	5.1 U
				,													
PRIORITY POLLUTANT		1															
METALS (mg/kg)																	
Arsenic (7060)	29	5 ()				NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA NA	NA
Chromium (6010)	38	23.1			插起 建氯氧	NA.	NA NA	NA NA	NA NA	NA NA	NA NA		NA .	NA.	* NA	NA NA	NA
Copper (6010)		19.1		TO DESCRIPTION OF THE PARTY OF	CREATING AND AND AND AND AND AND AND AND AND AND	16.9	21.5	17.3	18.8	23.4	16.4	16.5	17.8	19.7	19.2	16.8	18.3
Lead (7421)	The second secon		750		30	NA NA	NA NA	. NA	NA.	NA NA	NA	NA .		NA.	NA NA	NA E	NA NA
Nickel (6010) Zinc (6010)	130 12,000	21.4				NA 49.7	NA 60,3	NA 53.8	NA 54.9	NA 55.9	NA 52.8	NA 51.3	NA 53,2	NA 54.9	NA 56.7	NA 52:5	NA 55.4
Zinc (6010)	1×,000	00.2	Control of the Contro		49 JH 45 B	43.6	BUJ	33.5	54.9	55.8	92.5	31.0	03/2	0410	30.4	02.5	93,4
Cadmium (6010)	8					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)	THE RESERVE AND ADDRESS OF THE PARTY OF THE	57 for the 1			67 (B. 17 (A.	NA I	ŊA	NA NA	NA.	NA .	NA NA	NA -		NA	NA NA	NA NA	NA 4
man var var var mende in the visit of the control o	The state of the s	and the state of t					- Cr. Jack Shawking Adding	and the second second second second second					and the state of t				

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Page 12 of 24

						CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF NO N
		5	CREENING CRITERIA								<del></del>						
_			Risk-Base	ed Concentration	s	1											
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to												
Sample Identification: E	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB18 (7.5-9.0)	LB18 (18-19.5)	LB19 (7.5-9.0)	LB19 (18.0-20.2)	LB20 (7.5-9.0)	LB20 (16.3-17.0)	LB21 (7.5-9.0)	LB21 (15.4-16.4)	LB22 (7.5-9.0)	LB22 (16.8-17.3)	LB23 (7.5-9.0)	LB23 (16.7-17.7)
Laboratory Identification:	PRGs	Background	Excavation			R923AD	R923AE	R923AG	R923AH	R923AK	R923AL	R923AN	R923AO	R923AQ	R923AR	R923AT	R923AU
Date Collected:	DAF=20		Worker	Occupational	Occupational	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97	03/11/97
BETX (mg/kg)																	
EPA Method SW8021B			i														
Benzene	0.03	**	9400	48	0.052	0.064 L	0.069 U	0.066 U	0.064 U	0.062 L	0.068 U	0.068 U	0.066 ∪	0.064 U	0.068 1	J 0.066 U	
Ethylbenzene ::	13					0,064 L	0.069 U	0.066 U	0.064 U	-0.062 L	0.068 U	0.068 U	0.066 U	0.064 U	0.068 1	J 0:066 U	J 0.068 U
Toluene	12	-	-		180	0.064 L	0.069 U	0.066 U	0.064 U	0.062 L	0.068 ⊍	0.068 ∪	0.066 U	0.064 U	0.068	J 0.066 U	0.068 U
Xylenes, Total	210				100	NA NA	NA NA	NA.	NA NA	nA.	NA.	NA	NA	NA "	NA.	NA:	NA -
m,p-Xylene	210 (g)					0.064 L	0.069 U	0.066 U	0.064 U	0.062 U	0.068 U	0.068 U	0.066 U	0.064 U	0.068 L	J 0.066 U	0.068 U
o-Xylene	210 (9)			100	100 (g)	0.064 L	0.089 U	0.066 U	0.064 U	0.062 U	0.068 U	0.068 U	0.065 U	0.084 U	0.068 L	J. 0.066 L	J 0.068 U
DIOXINS AND FURANS (ng/kg)																	
Total TEQ	- 1					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 13 of 24

						CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF
			SCREENING CRITERIA													
				sed Concentratio		f										
		Site-	Soil Ingestion, Dermal	Volatilization to					LS7 (17.5-19.0)			1 H 1 P (00 01 0)	111100 (10 5 1 1 0)	LS7 (22.5-24.0)	111/00 40 5 47 01	11410D (7 F 0 D)
Sample Identification: Laboratory Identification:	EPA Region 9 PRGs	Specific Background	Contact, and Inhalation Excavation	Outdoor Air	Groundwater	LB24 (7.5-9.0) S057B	LB24 (12.5-14.0) S057C	LW1D (7.5-9.0) R950P	Dup of LW1D (7.5-9.0) R950S	H950Q	LW1S (15-16.50) R950R	S037B	S037P	Dup of LW2S (12.5-14.0) S037R	S037Q	LW3D (7.5-9.0) S037T
Date Collected:	DAF=20	Background	Worker	Occupational	Occupational	03/21/97	03/21/97	03/14/97	03/14/97	03/14/97	03/14/97	03/17/97	03/18/97	03/18/97	03/18/97	03/18/97
SEMIVOLATILES (mg/kg)																
EPA Method SW8270					1									11		
2,6-Dinitrotoluene	0.0007 84 (b)	-				NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	0.67 U 0.21	0.89 U 0.19	0.48 U 0.097 U	
2-Methylnaphthallene Acenaphthene	570					NA NA		NA NA	NA NA	NA	NA NA	NA NA	0.13 U	0.18 U	0.097 U	
Acenaphthylene	84 (b)					NA.		NA.	NA NA	NA.	NA.	NA NA	0.13 U		0.097 U	
Anthracene	12,000		~-			NA.		NA	NA	NA	NA	NA	0.13 U	0.18 U	0.097 U	
Benzo(a)anthracene	2		590			NA.		NA.	-NA	NA	NA.	NA NA	0.13 U		0.097, U	
Benzo(a)pyrene	8 5		59			NA NA		NA NA	NA PARTA NA	NA NA	NA NA	NA NA	0.13 U 0.13 U	0.18 U - 0.18 U	0.097 U 0.097 U	
Benzo(b)fluoranthene Benzo(g,h,i)perylene	84 (b)	-				NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	0.13 U	0.18 U	0.097 U	
Benzo(k)fluoranthene	49		5900			NA NA				NA NA		NA.			0.097 U	
bis(2-Ethylhexyl)phthalate	3600 (c)					NA	NA	NA	NA	NA	NA	NA	0.13 U	0.18 U	0.097 U	
Butylbenzylphthalate	930	No.				NA NA		NA	NA NA	NA NA	NA.	. NA.	0 13 U		0.097 U	
Carbazole	0.6		59.000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.13 U - 0.13 U	0.18 U 0.18 U	0.097 U 0.097 U	
Chrysene Dibenz/a,h)anthracene	160		59,000 59		-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.13 U	0.18 U	0.097 U	
Dibenzofuran	1.00	I PARTE				NA NA		NA.	NA NA	NA.	NA.	_ NA	0.18 U	0.18 U	0.097 U	
Diethylphthalate	3600 (c)				-	NA	NA	NA	NA	NA	NA	NA	0.13 U	0.18 U	0.097 U	NA
Dimethylphthalale	3600 (c)					NA.		NA.	NA	NA .	NA	NA	= 0.19 U	C 18: U	0.097 U	
Di-n-Butylphthalate	2300			_		NA	NA	NA NA	NA	NA	NA NA	NA	0.13 ∪	0.18 U	0.097 U	
Dr.n-Octyl phthalate Fluoranthene	10,000 4300		64			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	013 U	0.16 U 0.18 U	0.097 U 0.14	NA NA
Fluorene	4300 560		-			NA.		NA NA	NA NA	NA NA	NA NA	NA.	0.19./0.3		0.097 U	
Hexachloroethane	0.5		-			NA	NA	NA	NA	NA	NA	NA	0.27 U	0.36 U	0.19 U	
Indeno(1,2,3-od)pyrene	14		590			NA NA			, NA	NA	NA	. NA			0.097 L	
Naphthalene	84		20,000		15	NA	NA	NA NA	NA	NA	NA NA	NA NA	0.77	0.74	0.097 U	
Pentachiorophenol	0.03 84 (b)					NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.67 U 0.13 U	0.99 U 0.18 U	0.48 U 0.097 U	NA NA
Phenanthrene Pytene	4200		-			NA.	NA NA	NA NA	NA NA	NA NA	NA.		0.13 U	0.16 U	0.18	NA.
4.44	300 10000000000000000000000000000000000					St. denta strategical									100000000000000000000000000000000000000	1980 Literatura and and a particular and a control
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM																
Acenaphthene	570					NA	NA	0.0084 L	0.0085 U	0.01 U	NA	0.0086 U	NA	NA	NA	0.0085 U
Acenaphthylerie	84 (b)				Acres 4-00	NA		0.0084 L		0.01 U	NA	0.0086 U		NA.	NA NA	0.0085 U
Anthracene	12,000			**		NA	NA	0.0084 L		0.01 U	NA	0.0086 U	NA	NA NA	NA NA	0.0085 U
Benzo(a)anthracene	2 .		590			NA.		0.0084 L		0.022	NA NA	0.0086 U		NA.	ŊA	
Benzo(a)pyrene	8 5		59			NA NA	NA NA	0.0084 L		0.02	NA NA	0.0086 U 0.0086 U	NA NA	NA NA P	NA NA	0.0095 U 0.0085 U
Benzo(b)fluoranthene Benzo(g,h,i)perylene	84 (b)					NA NA	NA NA	0.0084 U		0.01 U	NA NA	0.0086 U	NA NA	NA NA	NA NA	0.0085 U
Benzo(k)fludranthene	49		5900			NA.		0.0084 U		0.02	NA.	0.0086 U		NA -		0.0085 U
Chrysene	160	Canada promonente antigado de April 1990 e 1990 e	59,000			NA	NA	0.0084 U		0.027	NA	0.0086 U	NA	NA	NA	0.0085 U
Dibenz(a,h)anthracene	2		59			NA		0.0084 U		0.01 U	NA	U 2800.0		NA	NA NA	0.0085 U
Fluoranthene	4300	-				NA.	NA NA	0.0084 U		0.041	NA NA	0.0086 U 0.0086 U	NA NA	NA NA	NA NA	0.0085 U 0.0085 U
Fluorene Indeno(1,2,3-cd)pyrene	560 14		590			NA NA	NA =	0.0084 U 0.0084 U	0.0085 U	0.01 U 0.01 U	NA NA	0,0086 U	NA NA	NA NA	NA NA	0.0085 U
Naphthalene	84		20,000		15	- NA			amount of the control	0.01 U	NA.				NA NA	0.0085 U
Phenanthrene	84 (b)		**		THE PERSON NAMED IN	NA	NA	0.0084 U	0.0085 U	0.023	NA	0.0086 U	NA	NA	NA	0.0085 U
Pyrene	4200	<b>非常的基础</b>				NA,	NA NA	0.0064 U	0.0085.U	0.041	NA	0:0086 U	NA NA	NA -	NA NA	0.0085 U
ALM ADDITION OF A																
CHLORINATED PHENOLS (mg/kg Method 8040/8270SIM	"															
Pentachlorophenol	0.03	_				NA	NA	0.0079 U	0.008 U	0.0095 U	NA	0.0081 U	110	82	12	0.083
		[														

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TABLE C-6b
Page 14 of 24

						CF	CF	CF	CF	CF	CF	CF	CF	° CF	· · · · CF	CF * *** ***
	****		SCREENING CRITERIA			<del> </del>										
				ed Concentration	ıs											
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to	1			LS7 (17.5-19.0)					LS7 (22.5-24.0)		
Sample Identification:		Specific	Contact, and Inhalation	Outdoor Air	Groundwater		LB24 (12.5-14.0)		Dup of LW1D (7.5-9.0)					Dup of LW2S (12.5-14.0)		LW3D (7.5-9.0)
Laboratory Identification:	PRGs	Background	Excavation	l	l	S057B	S057C	R950P	R950S	R950Q	R950R	S037B	S037P	S037R	S037Q	S037T
Date Collected:	DAF=20	<u> </u>	Worker	Occupational	Occupational	03/21/97	03/21/97	03/14/97	03/14/97	03/14/97	03/14/97	03/17/97	03/18/97	03/18/97	03/18/97	03/18/97
VOLATILES (mg/kg)		İ		1												
EPA Method SW8260			1			]										
1,2,4-Trimethylbenzene		-	40,000	790	55	NA.	NA	NA NA	NA NA	NA	NA_	NA	N/A	NA	NA NA	NA
1,2 Dibromosthane			E 21 71	1.7	0.000059	NA.	NA -	NA		NA :	NA.	NA		NA NA	NA.	NA.
1,3,5-Trimethylbenzene			40,000		12	NA NA	NA	NA	NA	NA	NA NA	NA NA	N,A	NA NA	NA NA	NA
2 Butanone 🔑 💯	A					NA NA		NA.	= NA		NA	NA NA	1,5 U	16 U		(2004年1月25日 日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日
4-Isopropyltoluene	12 (a)					NA.	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA
Acetone	16	ike mari				NA.		NA:	NA -	NA NA	NA.			and the second second	NA NA	NA NA
Benzene	0.03		9400	48	0.052	NA	NA NA	NA	NA	NA	NA	NA NA	0.31 U 0.31 D	0.32 U 0.32 U	NA NA	NA NA
Carbon Disulfide	32	Aller Aller Services and American		A minimum or description of the last of th		NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	0.31 U	0.32 U	NA NA	NA NA
Ethylbenzene Jappropylbenzene	13					NA NA		NA NA	NA NA		NA NA	NA NA	V.31 U	NA NA	NA NA	NA NA
m,p-Xylene	210 (g)		-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.31 U	0.32 U	NA NA	NA NA
Methy lodide	210 (g)				<u>.</u>	NA.		NA NA	NA -	NA .	NA.		NA.	0.32 U		NA NA
Methyl tert-butyl ether	-	-		720	0.30	NA.	NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene			20,000		15	NA.		NA.	NA NA	NA NA	NA I		NA NA	NA NA		NA
n-Butylbenzene						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene		W				-NA		NA.		NA	NA.	NA.	NA NA	NA NA	- NA	NA .
o-Xylene	210 (g)		**		100 (g)	NA.	NA	NA	NA	NA	NA	NA	0.31 U	0.32 U	NA	NA
sec Bulylberizene		Falls -		10 m + 10 m		NA.	NA.	NA.	NA	NA.	NA Ji	NA NA	NA	NA NA	NA NA	NA .
tert-Butylbenzene			-		-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
Toluene	12				180	NA.	NA	NA:	NA NA	NA.	NA:	NA.	0.31 U	0.32 U j	NA NA	NA NA
i																
HYDROCARBONS (mg/kg)																
NWTPH-HCID																
Gasoline		:		80,000	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kerosene						NA.		NA.	NA	NA NA	NA.	NA .	NA NA	NA .	NA :	NA NA
Diesel		**				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil				1 1 4		. NA	NA	NA.	NA	NA	NA.	NA NA	NA NA	. NA :	NA NA	NA
NWTPH-Dx (mg/kg)																
TPH-Diesel Range				_		6.4	J 6.4 U	6.4 L	6.4 U	6.8 U	NA	6.5 U	1200	1600	210	6.4 U
TPH-Kerosene Hange						NA NA	NA NA			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
TPH-Motor Oil Range	**************************************	T-270			THE WAR STREET	NA NA	NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA
- i																
NWTPH-G (mg/kg)		l i														
TPH-Gasoline Range		-		80,000	110	NA	AM	5.0 L	J 4.9 U	5.0 U	NA	5.1 U	NA	NA	80	5.0 U
DDIODITY DOLL HTANT																
PRIORITY POLLUTANT METALS (mg/kg)			İ													
Arsenic (7060)	29	5 (i)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Giromiam (6010)	23 38	2311				NA NA	NA NA	NA NA	NA NA	NA.		NA NA		NA NA	NA -	
Copper (6010)		19.1		-		NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	16.7
Lead (7421)		9.1	750		30	NA.	NA NA	NA NA	NA NA	NA -	NA:		NA NA	NA NA	NA S	
Nickel (6010)	130	21.4				NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA NA	NA	NA
Zinc (6010)	12,000	60,2		English English	w- with	NA.	NA.	NA.	NA NA	NA.	NA NA	NA	NA.	NA .	NA NA	50.6
						THE RESIDENCE OF THE PARTY OF THE				- A Common Commo	The same consistency of the same	and the second state of the second state of the second sec				and the same of th
Cadmium (6010)	8				1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (7471)						NA.	NA	NA NA	NA	NA	NA.	- NA		NA NA	NA_=	NA
					1											

7/19/05 \\\Edindatals\\\mprox\231\\009\132\\Phi\\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\\Phi\\ RI 07\1905\

Page 15 of 24

						CF	CF	CF	CF	CF	CF	CF	CF	** <b>CF</b> ***********	CF .	CF
			CREENING CRITERIA			<del>                                     </del>			·							***
•			Risk-Bas	ed Concentration	s	1										
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to	1			LS7 (17.5-19.0)					LS7 (22.5-24.0)		
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LB24 (7.5-9.0)			Dup of LW1D (7.5-9.0)			LW1D (30-31.5)	LW2S (12.5-14.0)	Dup of LW2S (12.5-14.0)	LW2S (16.5-17.0)	LW3D (7.5-9.0)
Laboratory Identification:	PRGs	Background	Excavation			S057B	S057C	R950P	R950S	R950Q	R950R	S037B	S037P	S037R	S037Q	S037T
Date Collected:	DAF≃20		Worker	Occupational	Occupational	03/21/97	03/21/97	03/14/97	03/14/97	03/14/97	03/14/97	03/17/97	03/18/97	03/18/97	03/18/97	03/18/97
BETX (mg/kg)															-	
EPA Method SW8021B																
Benzene	0.03		9400	48	0.052	NA.	NA	0.066 U	0.066 U	0.068 U	NA	0.066 U	NA	NA	0.064 U	0.066 U
Efhylbenzene	13					A NA	NA.	0:066 U	0.066 U	0.068 U	NA	0.066 U	NA NA	NA	0.25 U	0.066 U
Toluene	12	-	-		180	NA	NA	0.066 U	0.066 U	0.068 U	NA	0.066 U	NA	NA	0.064 U	0.066 U
Xylenes, Total	P10				100	NA.	NA.	NA	NA	NA NA	NA NA	NA	NA	NA	NA.	NA NA
m,p-Xylene	210 (g)					NA	NA	0.066 U	0.066 U	0.068 U	NA	0.066 U	NA	NA	0.064 U	0.066 ⊔
o-Xylene	210 (g)				100 (g)	NA.	NA.	0.066 U	0.066 U	-0.068 U	. INA	0.066 ∪	NA NA	NA NA	0.55 U	0.066 U
DIOXINS AND FURANS (ng/kg)						l										
Total TEQ	**		!			NA.	NA	NA	NA	NA	NA	NA	5110.9	NA	0.0706	NA

TABLE C-6b Page 16 of 24

### TABLE C-66 SUMMARY OF DETECTED ANALYTICAL RESULTS IN SOIL: PHASE II STUDY AREA (>3 FT)

						CF	CF	CF		CF	-	CF		CF	CF	CF
		,	SCREENING CRITERIA													
Sample Identification: Laboratory Identification: Date Collected:	EPA Region 9 PRGs DAF=20	Site- Specific Background	Risk-Bas Soil Ingestion, Dermal Contact, and Inhalation Excavation Worker	volatilization to Outdoor Air Occupational		LW3D (12.5-14.0) S037U 03/18/97	LW3D (16.0-17.2) S037V 03/18/97	LW3D (24.0-25.5) S037Z 03/19/97	LW3D (36.5-39.0) S037AA 03/19/97	) LW4DR (14.5-15) 0411117-01 11/18/2004	LW5S (10-11.5) R923V 03/12/97	LW5S (16.5-17.2) R923X 03/12/97	PZ-1 (13-16) 0210067-06A 10/08/02	LW11S (15-19) 0210067-02A 10/08/02	RW1 (13-17) 0210067-07A 10/08/02	OX1S (15-16) EM10B 06/14/02
SEMIYOLATILES (mg/kg) EPA Method SW8270								_								
2.6-Dinitrotoluene	0.0007					NA.	NA	0.48 U	0.44 U	NA	0.43 U	0.43 U	NA	NA	NA	NA
2-Methylnaphthalone	84 (b)					NA	NA.	0.096 U	0.088 U		0.086 U		NA NA	I NA	NA NA	NA
Acenaphthene Acenaphthylene	570 84 (b)		-			NA NA	NA NA	0.096 U 0.096 U	0.088 U	NA NA	0.086 U 0.086 U	0.086 U 0.086 U	NA N <b>A</b>	NA NA	NA NA	NA NA
Anthracene	12,000			**		NA NA	NA	0.096 U	0.088 U	NA	0.086 U	0.17	NA	NA	NA	NA
Benzo(a)anthracene	2		590			NA NA	NA.	0.096 U	0.068 U		0.15	0.39	VA.	NA S	NA MA	NA"
Benzo(a)pyrene Benzo(b)fluoranthene	8 5	_	59			NA NA	NA NA	0.096 U 0.096 U	0.088 U 0.088 U	NA NA	0.22 0.2	0.5 0.29	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)					NA	NA NA	0.096 U	0.088 U	NA	0.33	0.49	NA	NA	NA	NA
Benzo(k)fluoranthene	49		5900			NA!	NA NA	0.096 U	0.088 U	.NA NA	0.17	0,38 0.086 U	NA NA	NA NA	NA NA	NA
bis(2-Ethylhexyl)phthalate Butylbenzyphthalate	3600 (c) 930					NA NA	NA NA	0.096 U 0.096 U	0.088 U		0.086 U	0.086 U		NA NA	NA NA	NA NA
Carbazole	0.6			-		NA	NA	0.096 U	0.088 U	NA	0.086 U	0.086 U	NA	NA	NA	NA
Chrysene	160		59,000			, NA NA	NA : NA	0.096 U 0.096 U	0.088 U	NA NA	<b>0.23</b> 0.086 U	0.5 0.089	NA NA	NA NA	NA	NA NA
Dibenz(a,h)anthracene Dibenzofuran	2		59			NA NA	NA NA						NA NA	NA NA	NA .	NA NA
Diethylphthalate	3600 (c)	-		-		NA	NA	0.096 U	U 880.0	NA	0.086 U	0.086 U	NA	NA	NA	NA
Dimethylphthalate Di-n-Butylphthalate	3600 (c) 2300					NA NA	NA NA	0.096 U 0.096 U	0.088 U	NA NA	0.086 U 0.086 U	0.086 U 0.086 U	NA NA	NA NA	NA NA	NA NA
Di-n-Butylprimalate Di-n-Octyl phihalate	10,000	W 100				NA NA	NA NA			NA NA			- NA	NA NA	NA NA	NA
Fluoranthene	4300					NA NA	NA	0.096 U	0.088 U	NA NA	0.32	0.97	NA	NA	NA	NA
Fluorene	560 0.5					NA NA	NA NA	0.096 U 0.19 U	0.088 U 0.18 U	NA NA	0.086 U 0.17 ∪	0.086 U 0.17 U	NA NA	NA NA	NA NA	NA NA
Hexachloroethane indeno(1,2,3 cd)pyrene	0.5 14	-	590		-		NA NA	0.096 U	0.088 U		0.21	0.37	NA.		NA.	NA NA
Naphthalene	84		20,000	**	15	NA	NA	0.096 U	0.088 U	NANA	0.086 ∪	0.086 U	NA	NA	NA	NA
Rentachlorophenol Phenanthrene	0.03 84 (b)				-	NA NA	NA NA	0.48 U 0.096 U	0.44 U 0.088 U	0.333 U NA	0.43 U 0.13	0.43 U 0.72	NA NA	NA	NA NA	NA NA
Pyrene Pyrene	4200				-	NA NA	NA NA	0.096 0	0.088 U		0.57	1.3	NA.	NA		NA NA
SEMIVOLATILES (mg/kg) EPA Method SW8270SIM	"Alaman and Property Services	and defermine with the co														
Acenaphthene	570				ic stabili	U 8800.0	0.009 U 0.009 D		0.0089 U 0.0089 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene Anthracene	84 (b) 12,000			27-m 24-71 (28-27)		0.0088 U	0.009 D 0.017	0.0097 ∪	0.0089 U	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
Benzo(a)anthracene	2		590			0.0088 U	0.043	0.3097 U	0.0089 D		NA NA	NA NA	NA.	NA	NA.	NA .
Benzo(a)pyrene	8 colough/sevent-andous v	en. marri vi nassi vistansi	59			0.0088 U	0.046	0.0097 U	0.0089 U 0.0089 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b):lluoranthene Benzo(q,h,i)perylene	5 84 (b)		***	* 12		0,0088 U 0,0088 U	0.019 0.028	0.0097 U 0.0097 U	0.0089 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranttiene	49		5900	55 1011 10 2		0.0088 U	0,029	0.0097 U	- 0.0089 U	NA NA	NA -		NA.	NA	NA.	NA .
Chrysene	160		59,000			0.0088 U	0.04	0.0097 U	0.0089 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene Fluoranthene	2 4300	-	59			0.0088 U 0.0088 U	0.009 U 0.073	0.0097-U = 0.0097 U	U 9800.0	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	550		- 1			0.0088 U	0.009±U	0:0097 U	0.6089 U	NA NA	NA NA	NA 1	NA NA	NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene	14	**	590	rr Adio veni, veti mi detto i incoli	- A SET SAN THE SAN TH	0.0088 U	0.03	0.0097 U	0.0089 U	NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Naphthalene Phenanthrene	64 84 (b)		20,000		15	0,0088 U 0,0088 U	0.009 U 0.029	0.0097 U 0.0097 U	0.0089 U 0.0089 U	NA NA	NA ,	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrena:	4200					0.0088 U	0.023	0.0097 U	0.0089 U	NA NA	NA :	NA	NA.		NA.	) NA
CHLORINATED PHENOLS (mg/kg) Method 8040/8270SIM Pentachlorophenol	0.03					0.0083 U	0.0084 U	0.0091 U	0.0084 U	NA	<b>0.0077</b> J	0.013	1.09	16.7	0.333 U	6

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Page 17 of 24

						CF	° CF	CF	CF	· cp	CF.	CF" " " "	CF	CF	CF	CF
			CREENING CRITERIA													
		T	Risk-Bas	ed Concentration	ıs	]										
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to											
Sample Identification:		Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LW3D (12.5-14.0)		LW3D (24.0-25.5)				LW5S (16.5-17.2)	PZ-1 (13-16)	LW11S (15-19)	RW1 (13-17)	OX1S (15-16)
Laboratory Identification: Date Collected:	PRGs DAF=20	Background	Excavation Worker	Occupational	Occupational	S037U 03/18/97	S037V 03/18/97	S037Z 03/19/97	S037AA 03/19/97	0411117-01 11/18/2004	R923V 03/12/97	R923X 03/12/97	0210067-06A 10/08/02	0210067-02A 10/08/02	0210067-07A 10/08/02	EM10B 06/14/02
	DAF=20		worker	Occupational	Occupational	03/10/9/	03/10/3/	03/18/8/	00/19/97	11/10/2004	03/12/97	03/12/8/	10/00/02	10/00/02	10/00/02	00/14/02
VOLATILES (mg/kg)	Ī															
EPA Method SW8260			40,000	790	55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene 1,2-Dibromoethane	EE 2 14 051 85		40,000	17	0.000059	NA NA		NA NA	NA NA	NA NA	NA I	INA.	NA NA	NA NA	NA NA	NA NA
1,3.5-Trimethylbenzene		<b>田中、新子等点、台灣</b> 等	40,000		12	NA NA	NA	NA	NA	NA NA	NA NA	NA	NA NA	NA	NA	NA
2-Butanone	11 4 13 4 14 14 1		10,000			0.0068 U	NA NA	NA NA	NA	NA NA	NA NA	NA .		NA	NA NA	NA
4-Isopropytoluene	12 (a)					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	16					0.02	NA NA	NA NA	NA NA	NA	NA.	NA.	NA.	NA.	· NA	NA.
Benzene	0.03		9400	48	0.052	0.0014 U	NA NA	NA	NA	NA	NA	NA .	NA	NA.	NA NA	NA NA
Carbon Disulfide	32					0.0014. U	NA NA	NA NA		NA .			NA	NA	NA .	NA NA
Ethylbenzene	13		Later Landschafter (Specialist Land)			0.0014 U	NA NA	NA	NA NA	NA NA	NA.	NA	NA NA	NA NA	NA NA	NA NA
Isopropylbenzene						NA 0.0014 U	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
m,p-Xylene	210 (g)		97-417			0.0014 U	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA
Methyl lodide  Methyl tert-butyl ether				720	0.30	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA
Naphthalene			20,000	720	15	NA NA	NA.	NA.	NA.		NA NA			NA.	NA.	NA.
n-Butylbenzene						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene						NA	NA.	NA:	NA .	NA.	NA.	- NA	- NA	NA NA	NA.	NA
o-Xylene	210 (g)		-		100 (g)	0.0014 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzone						- NA -	NA	NA NA	NA NA		NA -			NA .	NA.	NA NA
tert-Butylbenzene	and the second s	The state of the s				NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	12		File and the second		180	0.0055 U	, NA	NA NA	NA NA	NA NA	NA NA	NA I	NA NA	NA.	NA	NA.
HYDROCARBONS (mg/kg)				l												
HTDROCARBONS (mg/kg)																
NWTPH-HCID																
Gasoline				80,000	110	NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA	NA NA	NA NA
Kerosene						NA NA	NA NA	NA NA	NA NA	NA. NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA
Diesel Lube Oil					-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	- NA	NA.
cope on							1977	- 22 - W. C LANS - W.	10 (80) \$40 (21/00)						1,4	Contract Contract -
NWTPH-Dx (mg/kg)																
TPH-Diesel Range	-				Marie Marie Sales Andreas	6.6 U	6.7 U	49	6.7 U	NA NA	8.3	17	NA	NA	NA	NA
TPH Kerosene Bange						NA S	NA NA	NA .	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
TPH-Motor Oil Range	-				-	NA	NA	NA	INA	NA	NA	NA	NA	NA	NA	NA
NWTPH-G (mg/kg)																
TPH-Gasoline Range				80,000	110	NA	5.0 U	5.1 U	NA	NA	5.0 U	5.0 U	NA	NA	NA	NA
			İ													
PRIORITY POLLUTANT																
METALS (mg/kg)	29	5 (j)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (7060) Chromium (6010)	38	23.1				NA NA	NA.	NA NA	NA S	NA NA	NA NA	NA NA	NA I	NA .	NA -	
Copper (6010)		19.1				15.8	16.9	33.6	14.7	NA NA	18.8	18.1	NA NA	NA	NA	NA
Lead (7421)	\$ 100 to 100 to 100	9.	750	Oler Control	30	NA NA	NA NA	- NA	NA	NA NA	NA.	NA NA	NA NA	NA NA	NA	NA NA
Nickel (6010)	130	21.4		-		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zino (6010)	12,000	60.2				52.0	52.0	71.0	49.3	NA:	56,9	54.9	NA .	NA NA	NA	NA NA
T T																
Cadmium (6010)	8					NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Mercury (7471)						NA .	NA	NA	NA	NA.		NA NA	IVA	NA S	DIA.	NA
	l	l f	ı	I												

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ABLE C-6b Page 18 of 24

						CF		CF CF	CF	CF	CF	CF CF	CF	CF	CF	CF: STEEL
-			CREENING CRITERIA					·								
-			Risk-Bas	ed Concentration	s											
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to											
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	LW3D (12.5-14.0)	LW3D (16.0-17.2)	LW3D (24.0-25.5)	LW3D (36.5-39.0)	LW4DR (14.5-15)	LW5S (10-11.5)	LW5S (16.5-17.2)	PZ-1 (13-16)	LW11S (15-19)	RW1 (13-17)	OX1S (15-16)
Laboratory Identification:	PRGs	Background	Excavation			S037U	S037V	S037Z	S037AA	0411117-01	R923V	R923X	0210067-06A	0210067-02A	0210067-07A	EM10B
Date Collected:	DAF=20		Worker	Occupational	Occupational	03/18/97	03/18/97	03/19/97	03/19/97	11/18/2004	03/12/97	03/12/97	10/08/02	10/08/02	10/08/02	06/14/02
BETX (mg/kg)																
EPA Method SW8021B																
Benzene	0.03		9400	48	0.052	NA NA	0.071 U	0.074 U	0.064 U	NA	0.068 L	0.074 U	NA	NA	NA	NA
Ethylbenzene	13					NA NA	0.071 U	9.074 U	0.064 U	NA	-0.068 L	0.074 U	NA.	NA .	NA.	NA NA
Toluene	12			-	180	NA	0.071 U	0.074 U	0.064 U	NA	0.068 L	0.074 U	NA	NA	NA	NA
Xylenes, Total	210				100	NA.	NA -	NA NA	NA.	NA NA	NA NA	NA NA	NA	NA NA	NA.	NA.
m,p-Xylene	210 (g)					NA	0.071 U	0.074 U	0.064 U	NA	0.068 L	0.074 U	NA	NA	NA	NA
o Xylene	210 (9)				100 (g)	NA	0.071 U	0.074 U	0.064 U	. NA	0.068 L	0.074 - U	NA_	NA NA	. NA	NA
DIOXINS AND FURANS (ng/kg)																
Total TEQ			-			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-6b Page 19 of 24

						CF	CF	CF CF	CF	CF	CF	CF	CF	CF.	CF	CF	CF
			SCREENING CRITERIA							-	· · · · · · · · · · · · · · · · · · ·						
				sed Concentration		]											
Sample Identification:	EPA Region 9	Site- Specific	Soil Ingestion, Dermal Contact, and Inhalation	Volatilization to Outdoor Air	Leaching to Groundwater	OX1S (14-1	7) OX2S (15-16)	OX2S (14-17)	OX3S (15-16)	OX3S (14-18)	OX4S (15.5-16.5)	OX4S (14-18)	OX5S (12-13)	OX6S (15-16)	OX7S (12-13)	OX8D (13.5-14.5)	OX8D (22-23)
Laboratory Identification:	PRGs	Background	Excavation	Ottaco Aii	Globiidwater	0210067-05		0210067-04A	EM10C	0210067-03A	EM10D	0210067-01A	0309126-05	0309126-04	0309126-08	0309126-02	0309126-03
Date Collected:	DAF=20	1	Worker	Occupational	Occupational	10/08/02	06/14/02	10/08/02	06/14/02	10/08/02	06/17/02	10/08/02	09/17/03	09/17/03	09/18/03	09/16/03	09/16/03
SEMIVOLATILES (mg/kg)																	
EPA Method SW8270			l			l											
2,6-Dinitrotoluene 2-Methylnaphthalene	0.0007			110-			IA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
z-memynaphmaiene Acenaphthene	84 (b) 570						IA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenephthylene	84 (b)						IA NA	NA NA	NA.		NA NA	NA.		NA.	NA NA	NA .	NA.
Anthracene	12,000						IA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzojajanthracene	2		590	1000000			IA NA		NA	NA NA	NA.	ŅĀ		NA	NA	NA ,	NA.
Benzo(a)pyrene Benzo(b)fluoranthene	8 6		59	-			IA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)	-					IA NA IA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthone	49		5900	1000			A NA	NA NA		NA.				NA NA	NA NA	NA.	NA NA
bis(2-Ethylhexyl)phthafate	3600 (c)	**	**			N	IA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bulybenzylphthalate	930						IA NA	. NA	, ŅA			, NA		NA	NA NA	NA .	NA
Carbazole Chtysene	0.6 160		59,000				IA NA IA NA	NA NA	NA NA:	NA NA	NA NA	NA NA	NA NA	NA NA T	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene	2		59 58 JUNU				IA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA S	NA NA	NA NA	NA NA
Dibenzoturan							A NA	NA.	NA.	NA NA	NA.	NA.		NA NA	NA NA	NA NA	NA
Diethylphthalate	3600 (c)	-					A NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA
Dirnethylpfilhalate	3600 (c)						A NA			NA.	NA =	NA I		Apr.	NA NA	NA -	NA.
Di-n-Butylphthalate Di-n-Octyl phthalate	2300	-					A NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	4300		-			N		NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Fluorene	560			W-54			A NA	NA NA	NA!	NA-	- NA	NA NA	NA.	ŊA	NA.		NA NA
Hexachloroethane	0.5					N		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	14		590		79	N N		NA	NA NA	NA.		- NA		- NA	NA-	NA	NA.
Naphthalene Pentachiorophenol	84 0.03		20,000		15	N	A NA A NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA N <b>A</b>
Phenanthrene	84 (b)			-		N.		NA	NA	NA.	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA
Pyrene	4200						A NA		NA .	NA.	NA NA	NA.	NA	NA NA	NA.	NA.	NA NA
SEMIVOLATILES (mg/kg)																	
EPA Method SW8270SIM Acenaphthene	570					N	A NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	84 (b)					N			NA.	NA.	NA NA	NA NA	NA .	NA NA		NA NA	NA NA
Anthracene	12,000					N.		NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	2		590	472			A NA	NA NA	NA.			NA.		NA =	NA	NA	NA F
Benzo(a)pyrene	8		59			N.		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Senzo(b)fluoranthene Benzo(g,h,i)perylene	84 (b)	-				N.		NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA
Benzo(k)fluoranthene	49		5900			- N		NA.	NA NA	NA.	N/A	NA.	NA .	NA NA	NA.		NA.
Chrysene	160		59,000			N.		NA	NA	NA	NA	NA_	NA NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	2		59			N.		NA .		- NA		NA NA	NA.	NA.	NA .	NA NA	NA E
Fluoranthene Fluorene	4300 560					N.		NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene	14		590			N.		NA.	NA NA	NA NA	NA	NA NA	NA NA	NA	NA.	NA	NA
Nachthalene	93		20,000		= 15	N/		NA I	NA NA	NA.	NA NA	NA.	NA.	NA NA	NA.	NA.	NA NA
Phenanthrene	84 (b)	-	-	-		N/	A NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA
Pyrene	4200					. Na	NA.	NA.	NA	NA .	NA.	NA NA	NA NA	NA	NA .	NA	NA
CHLORINATED PHENOLS (mg/kg	, [		ļ	ļ													
Method 8040/8270SIM	' I	· j															
Pentachlorophenol	0.03				[	2.71	9.9	37.7	11	3.22	1.3	0.415	0.333 U	0.576	0.333 U	0.333 U	12.9
	l			1	ſ									<u></u>			

Page 20 of 24

						CF	CF	CF :	CF	CF	CF	CF	CF	CF	CF	CF	CF
			SCREENING CRITERIA			<del> </del>											
			Risk-Bas	ed Concentration		1											
Sample Identification:	EPA Region 9	Site- Specific	Soil Ingestion, Dermal Contact, and Inhalation	Volatilization to Outdoor Air	Leaching to	OV40 (14 17)	OX2S (15-16)	OV26 (14.17)	OX3S (15-16)	OX3S (14-18)	OX4S (15.5-16.5)	OX4S (14-18)	OX5S (12-13)	OX6S (15-16)	OX7S (12-13)	OX8D (13.5-14.5)	OX8D (22-23)
Laboratory Identification:	PAGS	Background	Excavation	Uutdoor Air	Groundwater	OX1\$ (14-17) 0210067-05A	EM10A	OX2S (14-17) 0210067-04A	EM10C	0210067-03A	EM10D	0210067-01A	0309126-05	0309126-04	0309126-08	0309126-02	0309126-03
Date Collected:	DAF=20	Duonground	Worker	Occupational	Occupational	10/08/02	06/14/02	10/08/02	06/14/02	10/08/02	06/17/02	10/08/02	09/17/03	09/17/03	09/18/03	09/16/03	09/16/03
VOLATILES (mg/kg)	1																
EPA Method SW8260		]	İ			1											
1,2,4-Trimethylbenzene		ATTORNEY COMES ATTORNEY CONTENT	40,000	790	55	NA NA	NA	NA	NA NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA
1,2-Dibromoethane			71	1,7	0.000059	NA.		NA.	. NA NA	NA NA	NA NA	NA.	NA NA	NA -		NA NA	= NA
1,3,5-Trimethylbenzene 2-Bütahone			40,000		12	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
4-Isopropyltoluene	12 (a)					NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA.	NA NA	NA	NA	NA
Acetone	16		Ja 75			N/A	NA.	NA NA	NA	NA NA	NA NA	NA .	NA .	NA NA	NA NA	NA.	NA
Benzene	0.03		9400	48	0.052	NA	NA	NA	NA	NA NA	NA	NA	NA	NA NA	NA	NA	NA
Carbon Disulfide	32					NA	NA	NA NA		. NA	NA .	NA. "	NA		NA		S WW NA
Ethylbenzene Isopropylbenzene	13		148.454 (2.114.114.114.114.114.114.114.114.114.11			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
m.p.Xviene	210 (g)			-		NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Methyl lodide	210 (g)							NA NA	AM	NA.	NA NA	NA NA	NA.	NA.		NA NA	NA NA
Methyl tert-butyl ether				720	0.30	NA	NA	NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA	NA
Naphthalene	84		20;000		, =15i	NA	NA NA		NA.	NA NA	NA.	NA -		NA:	NA .	NA.	NA .
n-Butylbenzene	7.0 (35.00)					NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA.	NA	NA
n-Propylibenzene	010 (-)		4.0000		400 (+)	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
o-Xylene sec Bulylbenzene	210 (g)	-			100 (g)	NA NA	NA NA	NA NA		NA NA	NA NA	NA S	NA NA	NA NA	NA S		NA
tert-Butylbenzene			-			NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA
Toluene	12				180	-NA	NA.	NA:	- NA	NA.	, NA	NA /	NA NA	NA .	NA .	NA NA	NA.
HYDROCARBONS (mg/kg)																	
NWTPH-HCID	i																
Gasoline	and the second s	eneral controlation and thousand Will		80,000	110	NA.	NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA
Kerosene						NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
Diesel Lube Oil			(U) M (L)			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA -	NA NA
						Paris descriptions		Marin Company		11000		1 W. S.	a deplication property Affiliations.			Maria Caracteria Constitution of the Constitut	
NWTPH-Dx (mg/kg)									***		114	NA	ALA.	81.8	*14	514	
TPH-Diesel Range					-	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
TPH-Motor Oil Range	-		- CE-SECOND			NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA.	NA NA	NA	NA.	NA	NA NA
, , ,																	
NWTPH-G (mg/kg) TPH-Gasoline Range		_		80.000	110	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TEN-Gasoinie hange		-		80,000	110	130	130	140	144	14/5	110	1471	11/1	1977	1975	1471	101
PRIORITY POLLUTANT																	
METALS (mg/kg)																	
Arsenic (7060)	29	5 (j)				NA.	NA NA	NA	NA	NA.	NA.	NA	NA	NA	NA	NA	NA
Chronalum (6010)	38	23.1			AVE.	NA	NA -	NA.	NA	NA.			NA NA	NA NA		NA NA	NA NA
Copper (6010) Lead (7421)		19.1	750	-	30	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Lead (4421) Nickel (6010)	130	21.4	/30	***	99	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA
Zing (6010)	12,000	60.2			ata was	NA.	NA .	NA NA	- NA	NA S	NA NA	ŊĀ	NA	NA.	NA NA	NA NA	NA.
W	A Production of the Confession			manager, altitude annihilation for the con-								The state of the s					
Cadmium (6010)	8			amena (Sino Sanga) - 740 ass		NA	NA	NA	NA NA	NA	NA	NA	NA.	NA	NA	NA	NA
Mercury (7471)				<b>克森罗·莱</b>		NA NA	NA NA	NA	,NA	NA NA	NA.	NA	NA	NA NA	NA	NA NA	NA NA
	- 1	ſ	l	1	J												

BZTO104(e)023496

Page 21 of 24

						CF	CF	CF -	°CF	CF	CF .	CF	CF	CF .	CF	CF	CF
•			CREENING CRITERIA											•		_	
•				ed Concentration	s	ĺ											
		Site-	Soil ingestion, Dermal	Volatilization to	Leaching to	1											
Sample Identification:		Specific	Contact, and Inhalation	Outdoor Air	Groundwater	OX1S (14-17)	OX2S (15-16)	OX2S (14-17)	OX3S (15-16)		OX4S (15.5-16.5)	OX4S (14-18)	OX5S (12-13)	OX6S (15-16)			OX8D (22-23)
Laboratory Identification:	PRGs	Background	Excavation			0210067-05A	EM10A	0210067-04A	EM10C	0210067-03A	EM10D	0210067-01A	0309126-05	0309126-04	0309126-08	0309126-02	0309126-03
Date Collected:	DAF=20		Worker	Occupational	Occupational	10/08/02	06/14/02	10/08/02	06/14/02	10/08/02	06/17/02	10/08/02	09/17/03	09/17/03	09/18/03	09/16/03	09/16/03
BETX (mg/kg)				Ì													
EPA Method SW8021B																	
Benzene	0.03		9400	48	0.052	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylberizene	13				- 400 C - 400 C - 100 C	NA	NA.	NA	- NA	NA .	NA."	NA.	NA:	NA.	NA NA	NA .	NA NA
Toluene	12		-		180	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA.	NA
Xylenes, Total	210				100	NA.	NA NA	, NA	NA NA	NA S	NA .	- NA	NA.	NA.	NA NA	NA	NA NA
m,p-Xylene	210 (g)					NA.	NA NA	NA	NA	NA.	NA NA	NA.	NA	NA NA	NA.	NA NA	NA
o Xylene	210 (g).				100 (g)	NA .	NÁ	NA.	- NA	NA.	NA NA	NA.	l NA	NA NA	NA NA	NA -	NA NA
DIOXINS AND FURANS (ng/kg)																	
Total TEQ						NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

CF CF

			SCREENING CRITERIA				
			Risk-Bas	ed Concentration	ns		
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to	1	
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation		Groundwater	OX8S (13.5-14.5)	OX9S (12.5-13)
Laboratory Identification:		Background	Excavation	- Cuidour / III	Groomanator	0309126-01	0407078-01
Date Collected:		Lackground	Worker	Occupational	Occupational	09/16/03	07/14/04
	DAF=20	<del></del>	WORKE	_ Occupational	OCCUPATIONAL	08/10/03	07714904
SEMIVOLATILES (mg/kg)			1		ľ		
EPA Method SW8270			1				
2.6-Dinitrotoluene	0.0007					NA NA	NA
2-Methy naphthalene	84 (b)					NA.	NA NA
Acenaphthene	570					NA NA	NA NA
Acenaphinere	84 (b)	Annual Control of the				NA I	NA NA
Anthracene	12,000	482-102-000-000-0		-		NA .	NA
Benzo(a)anthracene	2		590			NA.	NA NA
Benzo(a)pyrene	8	and the second s	59			NA	NA
Benzo(b)fluorenthene	5		e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		# 198 Value	NA.	NA NA
Benzo(g,h,i)perylene	84 (b)		l <del></del>	l	L =	NA NA	NA .
Benzo(k)fluoranthene	49		5900	Carlotte Maria	<b>三二世</b> 新	NA.	NA.
bis(2-Ethylhexyl)phthalate	3600 (c)		••			NA	NA .
Butybenzylphthalate	930					NA NA	NA NA
Carbazole	0.6					NA.	NA
Chrysene	160		59,000			NA	NA NA
Dibenz(a,h)anthracene	2		59			NA	NA NA
Diberizoturan	La No					NAS	NA.
						NA NA	NA NA
Diethylphthalate	3600 (c)						
Dimethylphthalate	3600 (c)					NA .	NA.
Di-n-Butylphthalate	2300		**			NA NA	NA
Di-n-Cctyl phthaiate	10,000			77.28	**	NA NA	NA
Fluoranthene	4300					NA.	NA.
Fluorene	560					NA NA	NA.
Hexachloroethane	0.5					NA	NA
Indeno(1,2,3-cd)pyrene	14		590	6 7 4 1 (P. )	F 100 000 175	NA NA	ŅΑ
Naphthalene	84	more and property and the	20,000		15	NA	NA
Pentachierophenol	0.03		20,000			NA NA	0.833 U
					CRESION CRES	NA NA	NA NA
Phenanthrene	84 (b) 4200					NA NA	NA NA
Pyrene	4200					COST - LANCE	L. NA
					[		
SEMIVOLATILES (mg/kg)							
EPA Method SW8270SIM							1
Acenaphthene	570		-			NA .	NA NA
Acenaphthylene	84 (b)					NA	NA.
Anthracene	12,000	- Carlotte				NA	NA
Benzola)anthracene	2		590			NA	"NA
Benzo(a)pyrene	8		59	-		NA	NA
Benzo(b)fluoranthene	5					NA NA	NA NA
Benzo(g,h,i)perylene	84 (b)					NA NA	NA
Benzo(k)fluoranthene	49		5900			NA.	NA NA
	160		59,000			NA NA	NA NA
Chrysene					State Central Catherine		
Dipenz(a,r )anthracene	2		59			NA.	NA NA
Fluoranthene	4300	** **** :: *** *** ***	CORP. NO SECTION AND INVASION A		GR. 1280 W 10/032 V TWO	NA NA	NA NA
Fluorene	560						- NA-
Indeno(1,2,3-cd)pyrene	14		590			NA NA	NA NA
Naphthalene	84		20,000		15	NA NA	NA NA
Phenanthrene	84 (b)		AND ADDRESS OF THE PARTY AND ADDRESS OF THE PA			NA	NA
Pyrene	4200					NA 2	NA.
	- 1000 -						Age or agreement of the second
CHLORINATED PHENOLS (mg/kg		ļ	ļ	ļ			ļ
	ן	l	ļ				l
Method 8040/8270SIM							
Pentachlorophenol	0.03					3.22	NA
í			I				

Page 22 of 24

						CF CF	· · · · · · · · · · · · · · · · · · ·
			CREENING CRITERIA				
		T		ed Concentration	16	-	
		Site-	Soil Ingestion, Dermai	Volatilization to	Leaching to		
Sample Identification:	EPA Region 9	Specific	Contact, and Inhalation	Outdoor Air	Groundwater	OX8S (13.5-14.5)	OX9S (12.5-13)
Laboratory Identification:		Background	Excavation	Odidoor rui	Groomonator	0309126-01	0407078-01
Date Collected:		1 Duonground	Worker	Occupational	Occupational	09/16/03	07/14/04
	1	1		1	1		
VOLATILES (mg/kg) EPA Method SW8260							
	1	l	10.000				
1,2,4-Trimethylbenzene			40,000	790	55	NA NA	NA
1,2 Dibromoethane			40	17 0 0	0.000059	NA-	NA NA
1,3,5-Trimethylbenzene	 0::163:30380-::300:3-		40,000	 	12	NA NA	NA
2 Butanone		•	*		The state of the s	NA.	
4-Isopropyltoluene	12 (a)					NA NA	NA
Acetone III	16					, NA	NA NA
Benzene	0.03		9400	48	0.052	NA	NA
Carbon Distillide	32	er III ikk	9 ,			NA.	NA
Ethylbenzene	13	S-Ottomatic rains rains	-	-		NA NA	NA
(sopropylbenzene		YEAR E				NA	NA
m,p-Xylene	210 (g)		THE LINES LINES INTERCONCINENT DANC NO	NATIONAL PROCESSOR CONTRACTOR	MARKET - SHAPE TO A PROPERTY OF A STATE OF A	NA NA	NA NA
Methyl lodide						NA	NA NA
Methyl tert bulyl ether			to distilluy by the district of the service of the	720	0.30	NA NA	NA
Naphthalene	84		20,000		15	NA:	NA.
n-Butylbenzene						NA NA	NA
n-Propylbenzene	C SI LEW CO.					NA .	NA NA
o-Xylene	210 (g)				100 (g)	NA NA	NA
soc Bulylbenzene					A CONTRACTOR	NA -	NA .
tert-Butylbenzene						NA.	NA.
Toluene	12		医星基单位医疗	3. 4. 10. 1	180	NA .	NA:
HYDROCARBONS (mg/kg)							
NWTPH-HCID							i
Gasoline	_			80,000	110	NA	NA NA
Kerosene				00,000		NA.	NA NA
Diesel	THE RESERVE OF THE PARTY OF THE	3/19/2004				NA.	NA.
Lube Oit		28: No. 10			AT HE THE THE	NA NA	NA NA
Cabe or a				100.000.700.000	TOTAL PROPERTY.	The second second	- NO
NWTPH-Dx (mg/kg)							
TPH-Diesel Range						NA	NA
TPH-Kerosene Range						NA NA	NA NA
TPH-Motor Oil Range						NA	NA
AUGENIA CA III.							1
NWTPH-G (mg/kg)			i		440		.,,
TPH-Gasoline Range				80,000	110	NA	NΑ
PRIORITY POLLUTANT							1
METALS (mg/kg)							
		5.0			1	***	
Arsenic (7060)	29	5 (j)				NA	NA
Chromium (6010)	38	28.1				NA.	NA NA
Copper (6010)	 901980-2-1000259090-24885-0-10949	19.1				NA	NA
Lead (7421)		9	750		30	NA NA	NA .
Nickel (6010)	130	21.4				NA	NA
Zine (6010)	12,000	60.2				NA NA	NA
	_	ļ			l		
Cadmium (6010)	8					NA	NA
Mercury (7471)			Contract Contract			. NA	NA.

Page 23 of 24

						CF"	CF
			CREENING CRITERIA				
		I		ed Concentration	ıs		
		Site-	Soil Ingestion, Dermal	Volatilization to	Leaching to		
Sample Identification:		Specific	Contact, and Inhalation	Outdoor Air	Groundwater	OX8S (13.5-14.5)	OX9S (12.5-13)
Laboratory Identification:		Background	Excavation			0309126-01	0407078-01
Date Collected:	DAF=20	ļ	Worker	Occupational	Occupational	09/16/03	07/14/04
BETX (mg/kg)	i	l .				ĺ	
EPA Method SW8021B						1	
Benzene	0.03		9400	48	0.052	NA.	NA NA
Ethylbenzene	13					NA.	NA NA
Toluene	12	AND THE PERSONS			180	NA	NA
Xylenes, Total	210	2.42			100	Committee Commit	NA NA
m,p-Xylene	210 (g)	to a residence and constant	MINE DEBIGN REPORT OF SHAPE OF MARKET			NA NA	NA NA
o Xylene	210 (g)				100 (g)	SIGNATION NA	NA.
DIOXINS AND FURANS (ng/kg) Total TEQ						NA.	NA i
TOTAL TEX						1 1974	INA I

Page 24 of 24

### TABLE C-7 SUMMARY OF DETECTED ANALYTICAL RESULTS SOIL FOOTNOTES

U = Indicates compound was analyzed for, but was not detected at the reported sample detection limit.

UJ = Data validation flag indicating the analyte was not detected in the sample; the reported sample detection limit is an estimate.

J = Data validation flag indicating the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

NA = Not analyzed.

Bold indicates value is a detected constituent.

Box indicates value exceeds one or more screening criteria.

- (a) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (toluene) was used for the comparison.
- (b) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (naphthalene) was used for the comparison.
- (c) Values calculated using equation 10 in EPA's Soil Screening Guidance (EPA 1996).
- (d) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (bis(2-Ethylhexyl)phthalate) was used for comparison.
- (e) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (Di-n-butylphthalate) was used for the comparison.
- (f) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (benzene) was used for the comparison.
- (g) Value is for total xylenes.
- (h) Criteria less than site-specific background.
- (i) SLVs shown are for Arsenic III.
- (j) Site-specific background concentration was determined for arsenic during the COPC screening process of Phase I and II soil. However, since that time, additional information obtained from DEQ indicates that arsenic background in the Portland area are typically about 5 mg/kg (DEQ 1999).
- (k) SLVs shown are for Chromium III.

## Detected Constituents – Groundwater Data Summary Tables

Page 1 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CR											
Committee Information and a series	Oregon	SLVs - Sur	face Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration	٠		0.110.0	GW28-1			#11/0 #
Sample Identification: Laboratory identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation		Site- Specific	GW2-1 0108228-1	GW3-2 0108228-03	Dup of GW3-2 0108228-02	GW9-1 0110174-01	GW9-2 0110174-02	GW9-3 0110174-03
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/30/2001	8/30/2001	8/30/2001	10/24/2001	10/24/2001	10/24/2001
								1										
SEMIVOLATILES (µg/L)	ļ			İ						1								
EPA Method SW8270 2,4-Dimethylphenol	42			2120 (a)		850	i		850				3.00 U	3.00 U	3.00 U	3.00 L	3.00 U	3.00 U
2-Methylpaphthalene	620 (b)		284000 (b)	2120 (a)	-	650			630	E STATE OF S			1.00 U	1.00 U				23.2
Acenaphthene	520		ZO-1000 (D)	1700 (a)	520 (a)	990		-	990				1.00 U	1.00 U			2.46	1.00 U
bis(2-Lithythexyl)phthalate	30	8000	73000			2.2			2.2				1.00 U			The second secon	THE RESERVE THE PROPERTY OF THE PARTY OF THE	1.00 U
Carbazole			-						-		***	***	1.00 U	1.00 U	1.00 U	1.00 U		1.00 U
Dibenzoturan	3.7	44					1.00	i i i i i i i i i i i i i i i i i i i					U 00.1	1.00 Li	1.00 U	1.00 U	1.63	1.00 U
Di-n-Butylphthalate	35	800	2,200,000			4500			4500		AMERICAN DON CONTROL OF	TOTAL PROPERTY AND ASSESSMENT AND ASSESSMENT AND ASSESSMENT AND ASSESSMENT AS	1.00 U	1.00 U				1.00 U
Fluorene	3.9			1.897		5300	40 (20 to 1)		5300	10.00		340	1.00 Ü	1.00 U			7.37	2.81
Naphthalene	620	matrictorius Sich	284,000	2300 (a)	620 (a)		450 mining (65 min) (64 m)	Water Color Color Color Color Color		680			1.00 U	1.00 U	1.00 U	1.00 U		23.7
Pentachlorophenol	16		THE RESERVE THE PARTY OF THE PA	19(0)	15 (c)	3,0	19	15.	3:0				5.00 U	5,00 U		5.00 U	5,00 U	5.00 U
Phenanthrene Phenal	6.3 110		284000 (b)	40000 Jan	950096	1,700,000		F 15 33 15 15					1,00 U	1,00 U	1.00 U	10.4 1.00 U	3.86	1.65 1.00 U
THERE				10200 (a)	2560 (a)	and the second				A 100 M 100 M	***		1.00 U	1,00	1:00:0		ar ar and un	1.00:01
EPA Method SW8270SIM								1	1	1			l					
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				0.500 U	0.500 U	0.500 U	NA	NA	NA
							1		1									
PAHs (μg/L)								ŀ										
EPA Method SW8270 - SIM	620		201 202					İ						***				
2-Methylnaphthalene Acenaphthene	520		284,000	1700 (a)	520 (a)	990		-	990	vai			NA NA	NA 0,0500	0.0800	NA NA	NA NA	NA NA
Acenaphthylene	620 (b)		284,000	1/(0 (d)	940 (4)	990							NA NA	0.0500 U	0.0500 U	NA NA	NA NA	NA NA
Anthragene	13					40,000		ar or areas	40,000				NA =	0.0500 U	0.0500 Ü		NA.	NA.
Benzo(a)anthracene	0.027	2 - 100 007 - 100 00		- Index - Continuous Co.		0.018			0.018	9.1			0.0500 U	0.0500 U	0.0500 U	NA	NA	NA
Benzo(a)pyrene	0.014					0.018	# 11-4 V G		0.018	0.53			0.0500 U	0.0500 U	0.0500.0	NA.	NA NA	NA.
Benzo(b)fluoranthene	6.16 (d)	-				0.018			0.018				NA.	0.0500 U	0.0500 ∪	NA	NA	NA
Benzo(g.h.inperylene	4. Je												0.0500 U	0.0500 U	0.0500 U	NA	NA.	NA
Benzo(k)fluoranthene						0.018			0.018		 Altredige delle delle-vision	imperior and the major con-	0.0500 U	0.0500 U	0.0500 U	NA	NA	NA
Chrysene	A STATE OF THE STA	***************************************				0.018			0.018		5 J 6-4		0 0500 U	6.0500.0			NA	NA
Dibenzofuran	3.7			DECT OF		140		-					NA	NA	NA NA	NA	NA	NA
Mucranthere.	6,16 3.9		itti orani	3980 (a)		5300			140 5300				NA NA	0.0500 U 0.0500 U	0.0500 U 0.0500 U	NA NA	NA	NA NA
Indeno(1.2,34cd)pyrene	3.9					0.018			0.018				0.0500 U	0.0500 U	0.0500 U		NA NA	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)					680			NA	0.0500 U	0.0500	NA	NA.	NA NA
Phenanthrene	620 (b)		284000 (b)			<b>.</b>		E 016-01-5					NA	0.0500	0.0600	NA .		
Pyrene						4000			4000			700	NA	0.120	0.160	NA	NA	NA
VOLATILES (μg/L)										·								
EPA Method SW8260	130(e)	_	000000 (-)					ŀ		4000		i	0.000.11	0.000 11	0.000.11	0.000.17	2 200 11	
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	130(e) 130(e)		200000 (e) 200000 (e)	-		-		-		1300 1400			0,200 U 9,200 U	0.200 U 0.200 U	0.200 U 0.200 U	0.200 U 1.53	0.200 U 0.200 U	306 29.2
4-Isopropyitoluene	9.8 (f)		104000 (f)					5 × 15 × 15 × 15 × 15 × 15 × 15 × 15 ×	-				0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	5.74
Benzene		ma g	200,000	6300 (a)		51 (g)			51	1700	13,000		50.8	0.200 U	0.200 U		0.200 U	14.1
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100	-	-	29,000	110,000			0.200 U	0.200 U	0.200 U	0.200 ∪	0.200 U	51.3
Isopropylbenzene	130		200000 (e)				nega,	10.20					16.6	0:410	0.380	15,4	1.1.4	63.1
m,p-Xylene	13 (h)	THEN THE SECURIT	8000 (h)	**************************************	Barrier Manner	and the same and the same and	CARRY CORP.			22000 (i)			0.400 U	0.400 U	0.400 U	1.72	0.400 U	113
Methyl tert-Buryl Ether										31,000	550,000		NA NA	NA.	NA .	NA	NA	NA
n-Butylbenzene	130 (e)		200000 (e)	120000,000000000	-	-							4.01	0.200	0.200 U	3.01	3.37	4.97
n-Propylbenzerie Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	COO (-)		to Lieuwe		2 15 4 m L	680			23.3 0.920	0.730 0.500 U	0.690	15.0 2.22	14,2	72.0 66.2
Naphthalene e-Xylene	620 1.8		284,000 8000 (n)	2300 (a)	620 (a)					22000 (I)			0.92D 0.260	0.500 U	0.500 U 9.200 U	2,22 0,910	2.38	53.9
sec-Butylbenzene	130 (e)		200000 (e)			-		-		22000(1)			0.260 5.42	0.200 U	0.200 U	3.12	3.48	53.9
te t-Butylbenzene	130 (e)		200000 (e)										0.210	0.200 U	0.200 U	3.12 0.200 U	0,260	0.200 U
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000		and the second second	1.42	0.200 U	0.200 U	3.04	0.200 U	9.02
						,			,	,					5.250 0		3.233	
HYDROCARBONS (mg/L)																		
NWTPH-HCID												]						
Gasoline			Tuesday and and a state of the		VALUE AND AND AND AND AND AND AND AND AND AND	- Commence of the Commence of			TOTAL VEHICLE STATE AND A COMMON	12			Gasoline	0.25 U	0.25 U	0.25 U	0.25 UJ	Gasoline
Diesel										St. 5. 7.	100		Diesel	0.63 U	0.63 ∪	Diesel	Diesel	Diesel
Į.						,		'	,		- 1	ı						

7/19/05 \\Edmdata\wproc\231\009\132\Phill Ri 071905\Phill Ri Rpt\_App D\_Upper GW 1

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

Page 2 of 50

MIE MIE MIE MIE MTF SCREENING CRITERIA National Recommended Water Quality Criteria Risk-Based Concentration GW28-1 Dup of GW3-2 Sample Identification GW2-1 GW3-2 GW9-1 GW9-2 GW9-3 Construction Volatifization Site-Laboratory Identification Date Collected and Excavation to Outdoor Air Specific 0108228-1 0108228-03 0108228-02 0110174-01 0110174-02 0110174-03 10/24/2001 Worker Occupational Background 8/30/2001 8/30/2001 8/30/2001 NWTPH-Dx TPH-Diesel Range 19.6 J 2.93 J 2.81 J TPH-Motor Oil Range 0.548 J NA 0.500 U 0.500 U 0.500 U NWTPH-G TPH-Gasoline Range 3.46 NA 4.44 PRIORITY POLLUTANT METALS (mg/L) 0.15 (j) (\*) 18 (j) 6 0.34 0.15 0.00014 (g)( 0.011(k) 26 (k) 0.29 (j) 0.065 (j) 3433 Arsenic (7060) Chromium (6010) 0.34 (\*) 0.57 0.15 (\*) 0.0316 0.00014 (g)(\*) 0.00014 (\*) 1.5 0.0329 0.0149 0.0163 0.0211 0.0196 0.005C0 U 0.005 0.00500 U 0.00500 U 0.00500 U 0.00770 0.00500 U 0.004 Copper (6010) 0.009 341 53 0.05 (1) 0.011 (l) 0.013 0.009 0.0100 U 0.0100 U 0.0100 U 0.0100 U 0.0100 U 0.0100 U 323 0.043 (l) 0.0007 (l)(t) 0.00338 0.00200 U 0.00200 U 0.00236 0.00200 U 0.00289 Lead (7421) 0.0025 (\*) 28 0.065 0.0025 (\*) 0.02 0.33 (l) 0.052 (l) 0.00500 U 0.00500 U 0.00500 U 0.00500 U 0.00500 U 0.00500 U Nickel (6010) 0.052 562 38 0.47 0.052 4.6 0.01 Zinc (6010) 0.12 261 0.015 0.0100 U 0.0100 U 0.0100 U 0.0209 0.0100 U BETX (μg/L) EPA Method SW8021B 13000 Benzene 130 200000 5300 (a) 51 (g) 1700 110,000 ---Ethylbenzene 73 200000 (f) 32000 (a) 2100 29,000 15,000 9.8 104000 17500 (a) 78.000 Toluene 200,000 NA Xylenes Total 22,000 ---DIOXIN/FURANS (ng/L) EPA Method SW8290 Total TEQ 5.1E-06 NA NA

Page 3 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MTF
	0	CI Va Cu	Jane Water	I 0 4		0	SCREENING CRI		Overlie Culterie	T Dieb Beerd	O	r	1						
Sample Identification Laboratory Identification		n SLVs - Sur		Fresh	Fresh	r Quality Criteria Fish Consumption	Fresh	ommended Water Fresh	Organism	Construction and Excavation		Site- Specific	GW9-4 0110174-04	GW12-1 0108228-04	GW13-1 0108228-08	GW13-2 0108228-05	GW14-1 0108228-06	GW16-1 0108228-07	LW4S FY82K
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/24/2001	8/30/2001	8/30/2001	8/30/2001	8/30/2001	8/30/2001	10/24/2003
SEMIVOLATILES (µg/L) EPA Method SW8270																			
2,4-Dimethylphenol	42			2120 (a)	- 000 v. 000000 v. 00000	850			850				3.00 ∪	3.00 U	3.00 U	3.00 U	3.00 U		3 U
2-Methylnaphthalene Acenaphthene	620 (b) 520		284000 (b)	1700 (a)	520 (a)	990			990		10 May 25 10		1:00 U	1 00 U 1.53	1.00 U	1.00 U 15.4	7.06 1.00 U	6,19 1,00 U	1 U
bis(2-Ethylhexyl)phtharate	3.0	8000	730001	1700 (a)	520 (a)	2.2 -			2.2				1.95 1.00 U	1.53 1.00 U		15.4 1.00 U	1.00 U		10
Carbazole									-				1.00 U	1.00 U	1.00 U	19.6	1.00 U		1 U
Dibonzofuran Di-n-Butylphthalate	3.7	800	2,200,000			4500	-		4500				1,63 1,00 U	1.00 U	1.00 U 1.00 U	9.76 1.00 U	1.00 U 1.00 U	1.00 U 1.00 U	1 U
Fluorene	3.9		2,200,000			5300	7. E 1674 E 15		5300		F # 1	4 5 4 5	5.60	3,45	1:00 U	13,9	1.00 U		iŭ
Naphthalene Pentachlorophenol	620		284,000	2300 (a)	620 (a)		-		-	680			1.00 U	1.00 U	1.00 U	7.42	17.0	8.86 5.00 U	1 U 5 U
Phenanthrene	15 6.3		1800 284000 (b)	19 (c)	15 (c)	-3.0 	19 	15	3.0				5.00 U	5.00-U 2.58	5.00 U	6.20 U	5.00 U 1.00 U	1.00 U	1 U
Phenol	110			10200 (a)	2560 (a)	1,700,000					, Lines	3. J	1.00 U	1.00 U					2 U
EPA Method SW8270SIM																			
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA	0.500 U	0.500 U	0.500 U	4.35	0.500 U	3.9
PAHs (µg/L)							ĺ			1									
EPA Method SW8270 - SIM	i																		
2-Methylnaphthalene Acenaphthene	620 520		284,000	1700 (a)	520 (a)	990			990				NA NA	NA NA	NA 0.280	NA 0,150	NA 15.7	NA NA	NA NA
Acenaphthylene	620 (b)	**	284,000	-			-		-				NA.	NA NA	0.060	0.0500 U	0.350	NA.	NA
Anthracene Benzo(a)anthracene	13					40,000 0.018			40,000 0.018	9.1			NA NA	NA NA	<b>0.170</b> 0.0500 ป	0.0500 U 0.0500 U	0.490 0.0500 U	NA NA	NA NA
Benzo(a)pyrene	0.027 0.014					0.018 0.018			0.018	0.53			NA NA	NA NA	0.0500 U	0.0500 U	0.0500 U	NA NA	NA NA
Benzo(b)fluoranthene	6.16 (d)		on the shall read			0.018		to the start to the first transfer	0.018	-	idan sabasan saan saan		NA	NA	0.0500 U	0.0500 U	0.0500 U	NA NA	NA
Benzo(g,h;h)perylene Benzo(k)fluoranthene	-			-	-	0.018	en un au ar		0.018				NA NA	NA NA	0.0500 U 0.0500 U	0.0500 U 0.0500 U	0.0500 U 0.0500 U	NA NA	NA NA
Chrysene						0,018			0.018			6.72	NA NA	NA :	0.0500 U	0,0500 U	0.0500 U	NA .	NA
Dibenzofuran Fluoranthene	3.7 6.16		-	3980 (a)		 140	-		140		 b		NA NA	NA NA	NA 0.210	NA 0.0500 J	NA 0:410	NA NA	NA NA
Fluorene	3.9					5300			5300	-			NA NA	NA NA	0.300	0.210	14.0	NA NA	NA NA
Indeno(1,2,3-cd)pyrene						0.018			0.018				NA	NA	9.0500 U	0.0500 U	9.0500 U	NA .	NA .
Naphthalene Phenanthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)				-	680			NA NA	NA NA	0.3600 0.570	17.5 0.100	7.94 6.03	NA NA	NA NA
Pyrene	*-	**	**		**	4000			4000				NA	NA	0.320	0.0800	0.310	NA	NA
VOLATILES (µg/L)																			
EPA Method SW8260																			
1,2,4-Trimethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)	- 1× U. ×			-	-	-	1300			0.200 U 0.200 U	0.200 U 0.200 U	0.200 U 0.200 U	0.540 0.200 U	87.7 10.0	23.6 1.61	1.4
4-Isopropyltoluene	9.8 (f)		104000 (f)				-		-	-			0.200 U	0.200 U	0.200 U	0.200 U	1.55	1.26	1 U
Benzene Ethylbenzene	130 7.3		200,000 200000 (e)	5300 (a) 32000 (a)		<b>51 (g)</b> 2100			29.000	1700 110.000	13,000		0.550 0.200 U	0.200 U 0.200 U	0.200 U 0.200 U	13.0 4.61	0.200 U	0.390 44.5	1 U
Isopropylbenzene	130		Total Control of the										14.6	12.1	140	31,3	19.9	232	100
m,p-Xylene	13 (h)		8000 (h)							22000 (i) 31,000			0.400 U NA	0.400 U	0.400 U NA	1.74 NA	7.62 NA	8.71 NA	1 U NA.
Methyl tert-Butyl Etner n-Butylbenzene	130 (e)		200000 (e)			-				31,000	550,000		3.88	NA 3.72	3.29	5.86	3.57	13.8	1 U
n Propylbenzené	.130 (e)	100	200000 (e)		9.0								18.8	14.5	86.2	31.8	30.3	237	. 10
Naphthalene o-Xylene	620 1.8		284,000 8000 (fi)	2300 (a)	620 (a)	-				680 22000 (i)			2.74 0.920	0.500 U 0.290	0.500 U 0.370	20.3 0.640	33.6 1.39	29.2 0.480	5 U 1 U
sec-Butylbenzene	130 (e)		200000 (e)		-								3.80	5.68	9.29	7.43	3.98	21.4	1 U
tert-Butylbenzene	130 (e) 9.8		200000 (e)	17500 (a)		15,000			200,000	78,000			0.300 2.18	0.330 0.200 U	2.14 0.200 U	0.750 0.200 U	0.590 0.200 U	3.87 0.200 U	10
Toluene	9.6		104,000	rrout (a)		15,000	-	-	200,000	78,000		***	2.16	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	1 U
HYDROCARBONS (mg/L)			i																
NWTPH-HCID Gasoline		_					_			12			0.25 UJ	0.25 U	Gasoline	Gasoline	Gasoline	Gasoline	NA
Diesel	0.00	n e		a de la la									Diesel	Diesel	Diésel	Diesel	0.60 U		NA NA
ı			1			1	1				ı	1							

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# BZTO104(e)023506

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MIF
	r						SCREENING CRI	ÉDIA											
	Oracon	SLVs - Surf	ace Water	I Oregon i	Ambient West	r Quality Criteria		ommended Water (	Quality Critoria	Risk-Based 0	Concentration		1						
Sample Identification:	Diegonic	DE 18 - DUIT	ace water	Oragon /	anorem water	Fish	National Nec-	Jillinenaea Water V	abunty Officia	Construction	Volatifization	Site-	GW9-4	GW12-1	GW13-1	GW13-2	GW14-1	GW16-1	LW4S
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0110174-04	0108228-04	0108228-08	0108228-05	0108228-06	0108228-07	FY82K
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/24/2001	8/30/2001	8/30/2001	8/30/2001	8/30/2001	8/30/2001	10/24/2003
NWTPH-Dx								1				1							
TPH-Diesel Range													NA (**)	6.67 J	1.42 J	2.11 J	NA	2.37 J	0.26
TPH-Motor Oil Range					<b>建筑图</b> 编			FF E				2000		0.566 J	0.500 U.			0.500 U.	
Landson Company of the Company of th	ETTO MEET VOOR TO MARKS	(0, 6)-1 (-1 (-1 (-1 (-1 (-1 (-1 (-1 (-1 (-1 (		V nover-utter without	Manager make approx			26 4 975 115 Heritar (885 115)	The state of the s			SOCIETY INVASA PARK LINEAU			Hallicon en establish en		MEDICAL STREET FREE LANS		
NWTPH-G							1	!											
TPH-Gasoline Range							-	-		12			NA NA	NA	1.88	1.02	1.57	2.92	NA
				1									1						
PRIORITY POLLUTANT				i															
METALS (mg/L)				l						1									
Arsenic (7060) Chromium (6010)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0381	0.0393	0.0198 0.00500 U	0.0215	0.00755	0.0236	0.001
	0.011 (k)		25 (k)	0.29 (1)	0.065 (I)	3433	0.57	0.074			101 101	0.000	0 00500 U	0 00500 U	0.00509 U	0 00500 L	0.00500 U		
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009		CONTRACTOR OF THE STATE OF THE		0.004	0.0100 U 0.00200 U	0.0100 U 0.00200 U	0.0100 U	0.0100 U 0.00200 U	0.0100 U	0,0100 U 0,00200 U	0.006 - 0.001 U
	0 0025 (*)	28	923	0.043 (f)	0 0007 (l)(t)		0.065	0.0025 (*)					0.00200 U		0.00200 U	0.00500 U	0.00200 U	0.00200 U	0.001 U
Nickel (6010) Zinc (6010)	0.052	562	38 1290	0.33 (I)	0.052 (I) 0.1 (I)	4.6	0.47	0.052	4.6			0.01	0.00500 0	0.00500 U 0.0100 U		0.00500 U	0.00500 U		
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0,12	0.12	26			U.U15	U.U.U.U	0.0100 0	- AUGUO	0.0100.0	0.0300 0	0,0100 0	0.009
BETX (μg/L)				İ			İ												
EPA Method SW8021B													!						
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA.	NA	NA	NA	NA
Ethylbenzene	CON- https://doi.org/		200000 (b)			2100			29,000	110.000	10000	NAMES OF TAXABLE	NA.	NA NA	NA.	NA.		NA T	
Toluene	9.8		104000	17500 (a)		15,000	\$20 CREE 1881/06 TSD-854 X	C.EX. M.	200,000	78.000	CONTRACTOR OF THE PERSON AND PERS	D-419-100-100	NA	NA.	NA	NA	NA	NA	NA
Xyleres, Total	13 (h)		8000 (h)						200,000	22.000	4/14/14/14		NA NA	NA.	NA.	NA.		NA:	NA
	10-10-		- Deposit of	2014 mg - 2014 mg							20-1209-120-120-120-120-				grync same - E-val - NaMACA-No.				
DIOXIN/FURANS (ng/L)																			
EPA Method SW8290																			
Total TEQ						5.1E-06							NA NA	NA	NA	NA	NA	NA	NA.
										!		'		****					

## BZTO104(e)023507

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MTF	MITE
							SCREENING CR	ITERIA												
		ın SLVs - Sur	face Water	Oregon A	mbient Water	Quality Criteria		commended Water	Quality Criteria		Concentration		1			×				×
Sample Identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW4S 0402113-07	LW4S 0408036-08	LW45 0411066-12	Dup of LW4S 0411066-01	LW8S FY64L	LW8S 0402113-09	LW8S 0406059-07	Dup of LW8S 0406059-06
Date Collected		Birds	Mammals		Chronic	Only	CMC (Acute)	CCC (Chronic)		Worker	Occupational		2/23/2004	8/5/2004	11/11/2004	11/11/2004	10/21/2003	2/23/2004	6/9/2004	6/9/2004
SEMIVOLATILES (µg/L)	i												l							
EPA Method SW8270 2,4-Dimethylphenol	42					850	1	1	850	1			3.07 ∪	3 U	3.05 L	J 2.95 U	3.3 ∪	3.1 U	3.12 U	2.98 U
2.Methylnaphhalene	620 (b)		284000 (b)	2120 (a)					850				1.02 U	10			3.3 U	20.3	19.6	22.1
Acenaphthene	520			1700 (a)	520 (a)	990			990				1.02 U	1 U		U 889.0	1.1 U	1.03 U	1.04 U	0.994 U
bis(2-Ethy/hexyl)phthalate Carbazole	3.0	8000	73000			2.2		•	22				1 02 U 1.02 U	1 U 1 U			1.1 U 1.1 U	1.03 U 1.03 U	1.04 U 1.04 U	0.994 U 0.994 U
Dibenzofuran	3.7												1.02 U	iŭ			1.10	1.03 U	1.04 U	0.994 U
Di-n-Butylphthalate	35	800	2,200,000		-	4500			4500				1.02 U	1 U		0.983 U	1. <b>1</b> U	1.03 U	1.04 U	0.994 U
Fluorene Naphthalene	3.9 620		284,000	2300 (a)	620 (a)	6300			5300	680			1,02 U 1,02 U	1 JU	1 02 L 1 02 L		1.1 U 2.2	1.03 U 15.2	1,04 U 25.4	0.994 U 29.2
Pentachlorophenol	15		1800	- 10 (c) -	15 (0)	3.0	19	16	3.0				5,12.0	8.52		4.92 U	5.5 U	5.16 U	5.21 U	4.97 U
Phenanthrene Phenol	6.3		284000 (b)	300007-	2560 (a)								1.02 U 2.05 U	1 U 2 U			1.1 U 2.2 U	1.03 U 2.06.U	1.04 U 2.08 U	0.994 U 1.99 U
- THE INC.	110			10200 (a)	- 2100 (d)	1,700,000							2000	20	2036	1.97.0	2.2 0	2.00.0	2.08 0	099004
EPA Method SW8270SIM	15		1000	10 (4)	45 (-)	20	10	1 ,,	1 20	1			0.49 U	A1.4	0.404.11	0.5 U	0.55 U	0.504.11	0.517.11	0.404.11
Pentachlorophenol	15	-	1800	19 (c)	15 (c)	3.0	19	15	3.0	-			0.49 0	NA	0.494 U	0.50	0.55 0	0.504 U	0.517 U	0.491 U
PAHs (µg/L)										1										
EPA Method SW8270 - SIM 2-Methylnaphthalene	620		284,000			**							NA.	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	520			1700 (a)	520 (a)	-990			990				NA .	, NA	NA.	NA NA	NA.	NA	NA NA	NA #
Acenaphthylene Anthracene	620 (b)	-	284,000			40,000	-	-	40,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	0.027	-	-	inchilio-an		0.018			0.018	9.1	MA DI		NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA
Benzo(a)pyrene	0.014					0.018			.0.016	0.53			.NA	NA.	NA:	NA.	NA	NA	NA	NA
Benzo(b)fluoranthene Benzo(g,h, )perylene	6.16 (d)					0.018	-		0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene	-		-			0.018		-	0.018				NA	NA	NA	NA NA	NA	NA	NA	NA
Chrysene	3.7					0.018	****		0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenzofuran Fluoranthene	6.16			3980 (a)		140			140				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	3.9		-			5300	-		5300		TORREST NO. 10 CONTROL OF THE PARTY OF THE P	SCHOOL STATE	NA	NA NA	NA NA	NA	NA	NA NA	NA	NA NA
Indeno(1,2,3-cd)pyrene Naphthalene	620		284,000	2300 (a)	620 (a)	0.018			0.018	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	620 (b)		284000 (b)										NA NA	- NA	- NA	NA:	=NA	NA NA	NA NA	NA *
Pyrene				-		4000			4000	-			NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L)									1											
EPA Method SW8260 1,2,4-Trimethylbenzene	400/->		200000 (e)							1300			1.11	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimetry/benzene	130(e) 130 (e)		200000 (e) 200000 (e)							1400				1-10	1.0		1.0	10	- iŭ	i i i
4-isopropyitoluene	9.8 (f)		104000 (f)	**	**	-		-	-				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene Ethylbenzene	7.3		200,000 200000 (e)	32000 (a)		51 (g) 2100			29,000	1700 110,000	13,000		0.4 U 1 U	0.3±0 1.U	0.3 U 1 U	03 ⊎ 1 U	1 U 7.2	5.11 184	9.45 272 J	9,52 204 J
isopropylber zene	130		200000 (e)	STOCKER SERVICE WAY		PERSONAL CURRENCE.	ta section	Mar Maria	2.000				- 1 U	1 0	1/0	เป	140	239	244	215
m.p-Xylene	13 (h)		8000 (h)		 		- -		-	22000 (i) 31,000	550.000		2 U 1 U	2 U	2 U 1 U	2 U 1 U	1 U NA	2 U	2 U	2 U
Methyl tert-Sutyl Ether n-Butylbenzene	130 (e)		200000 (e)	-					-				1 U	1 U	1 U	1 U	9	8.07	10.2	9.5
n-Propylbenzene	130 (e)		200000 (e)										1 U =	. 1 U		1 U	94	205	275	228
Naphthalene o-Xylene	620 1.8		284,000 8000 (h)	2300 (a)	620 (a)					680 22000 (i)			1 U	1 U	1 U	1 U	5 U	24.5 1 U	51.7 1-U	46.6 1.11
sec-Butylbenzene	130 (e)		200000 (e)		-								1 U	1 U	1 U	1 U	19	23.1	29.8	29.5
tert-Butylbenzene	130 (e).		200000 (e)	47500 (-)		45,000			700,000	70.000			10		1 U		7.4 1 U	6.52	8.3	8.1
Toluene	9.8		104,000	17500 (a)		15,000	-	-	200,000	78,000		***	1 U	1 U	10	1 U	10	1 U	1 U	1 U
HYDROCARBONS (mg/L)								1												
NWTPH-HCID Gasoline			.			_	_		_	12			NA	NA.	NA	NA	NA	NA	NA	NA
Diesel					wire				-	12			NA.	NA NA	NA NA	NA:	NA NA	NA NA	NA.	NA NA
						and the second s		T												

7/19/05 \\Edmdata\wproc\231\009\132\Phill Ri 071905\Phill Ri Rpt\_App D Upper GW 1

Page 6 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MITE	MTF	MTF	MTF	MTF	MTF	MTE
				-			SCREENING CRIT	TERIA				-								
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria	Risk-Based C	oncentration	l' """"	1			x				X
Sample Identification:						Fish				Construction	Volatilization	Site-	LW4S	LW4S	LW4S	Dup of LW4S	LW8S	LW8S	LW8S	Dup of LW8S
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0402113-07	0408036-08	0411066-12	0411066-01	FY64L	0402113-09	0406059-07	0406059-06
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	2/23/2004	8/5/2004	11/11/2004	11/11/2004	10/21/2003	2/23/2004	6/9/2004	6/9/2004
NWTPH-Dx							i		i											
TPH-Diesel Range			-	-									0.244 U	0.256 U	0.244 U	0.248 U	3.5	11.7	8.52	8.36
1PH-Mator Oil Range									<b>医多多类型</b>				0.487 U	0.511 J	0.488 U	0.496 U	0.5 U	0.504 U	0.496 U	0:506 U
NWTPH-G									ì											
TPH-Gasoline Range								1		12			NA.	NA	NA	NA	4.6	9.23	8.62	8.37
Trir dasonie narge								. "		12		"	100	NA.	INA	IVA	4.0	3.23	0.02	0.37
PRIORITY POLLUTANT													1							
METALS (mg/L)										ı										
Arsenic (7060)	0.15 (i) (*)	18 (i)	6	0.34	0.15	0.00014 (a)(^)	0.34 (*)	0.16 (*)	0.00014 (*)			1,5	0.001 U	0.001 U	0.001 U	0.001 U	0.021	0.025	0.0225	0.0228
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)	0.065 (1)	3433	0.57	0.074				0.005	0.0071	0.005 U	C.005 U	0.005 Ú	0.007	0.0064	0.0144	0.0161
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009				0.004	0.01 U	0.01 U	0.01 U	0.01 U	0.007	0.01 U	0.01 U	0.01 U
Lead (7425)	0.0025 (*)	28	323	0 043 (1)	0.0007 (1)(*)		0.065	0.0025 (*)		2.32*2	500	0.02	0.0001 년	0.0001 U	0.00018	0.00067	0.002	0.000124	0.0001	0.0001
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.005 U		0.0128 U	0.02	0.005 U	0.005 U	0.005 U
Zinč (6090)	0.120	105	1230	0.1 (1)	0,1 (1)	26	0.12	0,12	26			0.015	0.01 U	0.01 U	. 0.01 U	0.61 U	0.027	0.01 U	0:01 U	0.01 U
												1	ł							
BETX (µg/L)							l													
EPA Method SW8021B													l ,							
Benzene	130	Control States	200000 200000 (f)	5300 (a)		51 (g)			51 29,000	1700 110,000	13000	NAME OF TAXABLE PARTY.	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Ethylbenzene Toluene	9.8		104000	32000 (a) 17500 (a)		2100 15,000			200,000	78.000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Xylenes, Total	13 (h)		8000 (h)			15,000			200,000	22,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		The second secon
Ayuntes, rouse	(3(0)	The transfer of	0000 (H)	Territoria Territoria	A second				THE R. P. LEWIS CO., LANSING	62,000		AND DESCRIPTIONS	IVA	NA	COMPANDE NAME	- NA	IVA.	· INA	NA NA	NA S
DIOXIN/FURANS (ng/L)									*			l	ĺ							
EPA Method SW8290																				
Total TEQ				***		5.1E-06							NA.	NA	NA	NA	NA	NA	NA	NA
						5	'			'		'		191		1101		1473	197	140

Page 7 of 50

## BZTO104(e)023509

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MTF	MTF
	Γ						SCREENING CR	TERIA												
	Oregor	n SLVs - Surfa	ce Water	Oregon Ar	mblent Water	Quality Criteria		ommended Water	Quality Criteria		Concentration	1	1							
Sample Identification Laboratory Identification	1			Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW8S 0408036-02	LW8S 0411051-09	LW13S FY82E	LW13S 0402113-06	LW13S 0408036-07	LW13S 0411066-16	LW19S FZ04O	LW19\$ 0402115-04
Date Collected		Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)		Worker	Occupational	Background	8/5/2004	11/9/2004	10/23/2003	2/23/2004	8/5/2004	11/11/2004	10/28/2003	2/24/2004
SEMIVOLATILES (µg/L)																				
EPA Method SW8270	1			ŀ			İ													
2,4-Dimethylphenol	42			2120 (a)		850			850				6.88		NA NA	NA NA	NA NA	2.89 U	3 U	3 U
2-Methylnaphthalene Acenaphthene	620 (b) 520		284000 (b)	1700 (a)	520 (a)	990			990				1 1		NA NA	NA NA	NA NA	0.962 U 0.962 U	1.1	1 U
bis(2-Ethylnexyl)phthalate	80	8000	73000	••	2.2	2.2			22	PERE			100			NA I	NA.	0.962 U		10,
Carbazole		terrores of the second											1 L		NA	NA NA	NA	0.962 U	1 U	1 U
Dibenzofuran Di-n-Butylphthalate	3.7 35	800	2,200,000			4500			4500	-			1.1		NA NA	NA NA	NA NA	0.962 ⊎ 1.39	1.5 1 U	1,02 1 U
Fluorene	3.9					5300	14 Table 1	2 2 3	6300				1 t		NA NA	NA.	NA.	0.962 U	3.5	2.82
Naphthalene	620		284,000	2300 (a)	620 (a)		-			680			6.7	1.01 U	NA	NA	NA	0.962 U	1 U	1 U
Pentachlorophendl Phenanthrene	6.3		1800 284000 (b)	19 (c)	15 (c)	3.0	- 10	- 15 · · ·	3.0				5 <b>U</b>		NA NA	NA NA	NA NA	4.81 U 0.962 U	5 U 3.3	5 U. 1 U
Phenol Phenol	110		204000 (D)	10200 (a)	2560 (a)	1,700,000			عمقها				2 (			NA NA	NA NA	1.92 U		
														Nashman and Shirt						
EPA Method SW8270SIM Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				0.5 U	0.525 U	1.0	0.482 U	0.5 L	J NA	NA	NA
•	"		1000	10 (0)	10 (0)	5.0	15	"	0.0				0.00	0.020	1.0	0.402 0	5.5 C		147	140
PAHs (μg/L) EPA Method SW8270 - SIM																				
2-Methylnaphthalene	620		284,000					**					NA NA	NA	NA	NA	NA	NA	0.1 U	NA
Acenaphthene	520			1700 (a)	520 (a)	990			990				NA	NA.	NA.	NA.	NA.	NA -	0.84	0.857
Acenaphthylene	620 (b)		284,000			-					TV-SSRSYNSSSSSSSSSSSSSSS		NA NA	NA	NA	NA NA	NA	NA NA	0.1 U	0.159
Anthracene Benzo(a)anthracene	0.027					40,000 0.018			40,000 0.018	9.1			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U 0.1 U	0.0498 U 0.0498 U
Benzo(a)pyrene	0.014					0.018			0.018			STANK STANK	NA	NA NA	NA NA		NA NA	NA NA	0.10	0.0498 U
Benzo(b)fluoranthene	6.16 (d)	Language de la companya de la compan	off Happy Fought Light	Secret colorer attended	NECONY ENGINEERS AND A	0.018		-	0.018			ECVED BY DESIGNATION	NA	NA	NA	NA NA	NA NA	NA	0.1 U	0.0498 U
Beruzo(g.h.i)perylene Benzo(k)fluoranthene						0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U 0.1 U	0.0498 U 0.0498 U
Chrysene						0.018			0.018				NA NA	NA NA	NA.	NA NA	NA.	NA NA	a i u	0.0498 U
Dibenzofuran	3.7					CONTROL OF THE PROPERTY OF THE		-		-			NA	NA	NA	NA	NA	NA	0.77	NA NA
Fluoranthere Fluorane	6.15 3.9			3980 (a)		140 5300			140 5300		ACCOUNTS NOT ASSESSED.	5.73 Marie 10	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U n 2.5	0.0498 U 2.35
Indeno(1,2,3-cd)pyrene	3.5					0.018			0.018			THE WAY	NA NA	NA.	NA T	NA II	NA.	NA NA	2.5 0.1-U	0.0498 (J
Naphthalene	620		284,000	2300 (a)	620 (a)		-			680			NA	NA	NA_	NA_	NA.	NA	0.1 U	0.369
Phenanthrene	620 (b)		284000 (b)		70.	4000			+314				NA.	NA NA	NA NA	NA NA	NA NA	NA	2	0.339
Pyrene				-		4000			4000				NA	NA	INA	NA	NA	NA	0.1 U	0.0498 U
VOLATILES (µg/L)												İ								
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			3.74	1 U	NA	NA	NA	1 U	1.13	1 U
3.5-Trimethylbenzene	130(e)		200000 (e)							1400			3.74 4.0	10	NA NA	NA NA	NA:	1.0	- IV	10
4-Isopropyltoluene	9.8 (f)		104000 (f)	-	-			-		-			1 U	1 U	NA	NA	NA	1 U	1 U	1 U
Benzene Ethylbenzene	130 7.3		200,000 200000 (e)	5300 (a) 32000 (a)		51 (g) 2100			29.000	1700 110.000	13,000		1,86 17.9	0,59 3.7	NA NA	NA.	NA NA	0,3 U 1 U	1 U	0.4 U 1 U
Isopropyibenzena	7.3 130		200000 (e)	52000 (a)		2100			29,000	110,000			232	52.4	NA.	NA NA	NA NA		6.5	
m,p-Xylene	13 (h)	**	8000 (h)	**	**	**	-	-		22000 (i)			2.31	2 U	NA	NA	NA	2 U	1 U	2 U
Methyl tert-Butyl Ether	130 (e)		200000 (e)							31,000	550,000		1 U 10.1	1.⊍ 7.05	NA NA	NA NA	NA NA	1 U	1 U 2.9 M	1 U 2.78
n-Butylbenzene n-Prepylbenzene	130 (e) 130 (e)		200000 (e) 200000 (e)								 		10.1	7.05 93.2	NA NA	NA NA	NA NA	10	2.9 M 8.9	2.78 9.37
Naphthalene	620		284,000	2300 (a)	620 (a)				**	680		***	16.7	1 U	ŅĀ	NA	NA	1 U	5 U	1 U
o-Xylene	1.8		8000 (h)		PR 90 1 10 100	23 - 25 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		19-11-11-11-11-11	-45	22000.0)			1.21	100	NA NA	NA	NA.	10		10
sec-Butylbenzene tert-Butylbenzene	130 (e) 130 (e)		200000 (e)			98/45/2020					MAN TO SEE		25.6 8.83	18.5 6.74	NA NA	NA NA	NA NA	1 U	4,7	4.92 1 U
Toluene	9.8	enco-teat-sent-CMC	104,000	17500 (a)		15,000		-	200,000	78,000	The state of the s		1 U	1 U	NA	NA	NA	1 U	1 U	1 U
HYDROCARBONS (mg/L)			- 1								Ì	1								
NWTPH-HCID												Į								
Gasoline										12			NA	NA	NA	NA	NA.	NA	NA	NA.
Diesel													NA _	NA	NA :	NA.	NA.	NA	NA .	NA NA

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#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

E D-1 Page 8 of 50

													MTF	MIF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRI	TERIA					<u> </u>							
	Oregon	SLVs - Suri	ace Water	Oregon A	mblent Water	Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based	Concentration	T	1							
Sample identification:						Fish				Construction	Volatifization	Site-	LW8S	LW8S	LW13S	LW13S	LW13S	LW13S	LW19S	LW195
Laboratory identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0408036-02 8/5/2004	0411051-09	FY82E 10/23/2003	0402113-06	0408036-07	0411066-16	FZ04O	0402115-04
	Aquanc	Dirds	wamnais	ACUTE	Chronic	Only	CMC (Acute)	CCC (Chronic)	Uniy	Worker	Occupational	Васкдгоило	8/5/2004	11/9/2004	10/23/2003	2/23/2004	8/5/2004	11/11/2004	10/28/2003	2/24/2004
NWTPH-Dx				1						İ		ļ								
TPH-Diesel Range			TO COMPANY AND A SERVICE	-		#A				-		CONTRACTOR AND ADMINISTRATION AND	5.15	4.11	NA.	NA.	NA.	0.244 U	4.4	7.53
TPH-Motor Oil Range		- CON 1 AND			e e e e e e e e e e e e e e e e e e e	40 44							0.488	U 0.484 U	NA :	NA.	NA	0.489 U	0.5 U	1,07
NWTPH-G	ļ						ļ	ļ	1	i										
TPH-Gasoline Range				-						12			4.44	4.37	NA	NA	NA	NA	1.1	1.33
-										ļ			ĺ							
PRIORITY POLLUTANT										Ì		ŀ								
METALS (mg/L)																				
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)	-		1.5	0.0223	0.0239	NA	NA NA	NA	0.001 U	0.046	0.0402
Chromium (6010)	0.014 (k)		25 (k)	0.29(4)	0.065 (I)	3433	0.57	0,074			. 7 OL 1. 7	0.005	0.005 (	U 0:005 U	NA.	NA NA	- NA	0.0235	0 005 U	0.0095
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009				0.004	0.01 (		NA NA	NA NA	NA NA	0.0609	0.002 U	0.01 U
Lead (7421)	0.0025 (*)	28	323	0.043 (1)	0.0007 (f)(*)		0.085	0.0025 (1)				0.02	0.0001	0.00013 U	A NA	NA.		0.00029	0.001	
Nickel (6010) Zinc (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6	anne miny manification	SARE Wild stationer was	0.01	0.005 (		NA	NA NA	NA_	0.0853	0.01 U	0.005 U
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26			0.015	0.01-1	J 0.01 U	NA .	NA I	NA.	0.01 U	0.806 U	0.01 U
DETY ( a )									i	I										
BETX (µg/L) EPA Method SW8021B				i																
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (1)	32000 (a)	W.	2100			29,000		13000	o masari			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	9.8		104000	17500 (a)		15,000			200.000	78,000		STREETS STREET, STREETS	NA NA	NA.	NA.	NA NA	NA.	NA NA	NA NA	NA
Xyenes, Total						the same of the same of				22,000	COLUMN SE		NA.	NA.	NA.	NA.	NA.	NA NA	NA NA	NA
Control and the same and the sa								more on national limited limited	TAMES NO AND THE PARTY OF THE P	Commence of the Commence of th	E-MELTONALINE BUILDINGS						ensummatelier ville 1860	r mor harmade Middenson		THE PARTY OF THE P
DIOXIN/FURANS (ng/L)										1										
EPA Method SW8290																				
Total TEQ						5.1E-06							NA	NA	NA	NA	NA	NA	NA	NA

Diesel

TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS **UPPER ZONE GROUNDWATER SAMPLES** 

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Page 9 of 50

#### MIF MIF MTF MIF MTF SCREENING CRITERIA Risk-Based Concentration Sample Identification Site-LW19S LW19S LW19S LW20S LW20S Volatilization Laboratory Identification Consumption and Excavation to Outdoor Air 406050-12 0408056-08 0411059-01 FZ04M 0402115-02 Date Collected: 6/8/2004 8/9/2004 10/28/2003 2/24/2004 SEMIVOLATILES (µg/L) EPA Method SW8270 2,4-Dimethylphenol 850 3.05.11 3.04 U 2.93 U 3.03 U 620 (b) - 284000 (b) 2-Methylnaphthalene 10231 10111 0.977 U 1 1 11 J.01.U Acenaphthene 520 1700 (a) 520 (a) 990 990 1 02 11 1.09 1.04 1.4 1.25 bis(2-Ethylhexyl)phthala 1,01 U 30 - 8000 2.2 1 02 11 10111 0.977 U 1111 Carbazole 1.02 U 1.01 U 0.977 U 1.1 U 1.01 U Dibenzoluran 1.08 1.01 U 1:1:U 1.43 1.33 Di-n-Butylphthalate 800 2,200,000 4500 4500 1.02 U 1.1 U 1.01 U 1.01 U 0.977 U Fluorene 3.04 Naphthalene 620 2300 (a) 620 (a) 19 (c) 15 (c) 680 1.02 U 1.01 U 1.01 U 3.0 19 16 9.0 Pentachlorophenol 15 1800 6.08 U 5.07 U 4-88-U 5.6 U 5.05 U 2.3 2.26 2.2 U 2.02 U Phenanthrene 6.3 284000 (b 1.41 1.21 2.31 10200 (a) 2560 (a) 1,700,000 2 03 U 110 2.03 U 1.95 U ... Phenol .... EPA Method SW8270SIM Pentachlorophenoi 15 1800 19 (c) 15 (c) 3.0 19 15 3.0 NA NA NA NA NA PAHs (µg/L) EPA Method SW8270 - SIM 2-Methylnaphthalene 620 284,000 520 1700 (a) 520 (a) 0 999 0.91 J Acenaphthene 990 0.678 1.9 Acenaphthylene 620 (b) 284,000 0.3 0.0698 0.283 0.11 U 0.256 Anthracene 40.000 0.0716 13... 40,000 0.0997 0.0807 0.14 0.18 Benzo(a)anthracene 0.027 0.11 U 0.018 0.018 0.05 U 0.0499 L 0.0511 U Benzo(a)pyrene 0.014 0.018 7 0 0 0.018 =0.05 U 0.0499 U 0.0505 U 0.11 L 0.0511 U Benzo(b)fluoranthene 6.16 (d) 0.0505 U Benzo(g, hij)perylene 0.05 U 0.0499 U 0:0505 U 0.11 U 0.0511 U Benzo(k)fluoranthene 0.018 0.018 0.05 U 0.0499 U 0.0505 U 0.11 U 0.0511 11 Chrysene 0.018 0.018 0.05 U 0.0499 U 0:0505 U 0.11 U 0.0511 U Dibenzofuran 3.7 0.59 NA 0.05 U Fluoranthene 6.16 140 140 0.0499 11 0.0505.11 0.11 U 0.0511-11 3.9 5300 3.88 3.29 2.55 J Fluorene 5300 1.59 Indeno(1,2,3-cd)pyrene 0.0499 U 0.0505 U on U 0.0514 U 620 2300 (a) 620 (a) 0.76 0.515 680 Phenanthrene 1,44 J 1.7 Pyrene 4000 4000 0.05 U 0.0499 U 0.0505 U 0.11 U 0.0511 U VOLATILES (µg/L) EPA Method SW8260 1,2,4-Trimethylbenzene 130(e) 200000 (e 1400 . u u . 10 10 1:03 1,3,5 Trimethylbenzene 200000 (e) \* - -Park e es 130 (e) -1U-4-Isopropyltoluene 9.8 (f) 104000 (f) 1 U 1 U 1 U 1 U 1 UJ Benzene 1700 0.95 J 130 200.C00 13.000 Q3 U 0.3 U 0.3 U 7.3 Ethylbenzene 200000 (e) 32000 (a) 2100 29,000 110,000 1 U 1 U 1 U 1 UJ Isopropylbenzene 130 200000 (e 7.29 7.89 J 13 (h) 8000 (h) 22000 (i) Methyl tert-Butyl-Ether (5,474 Birt 1 10 n-Butylbenzene 130 (e) 200000 (6 3 17 22 3.43 J 10.8 J n-Propylbenzene 130 (e) 200000 (6 12.3 Naphthalene p-Xylene 620 284 000 2300 (a) 620 (a) 680 1.11 5.11 1.8 8000.(h). 22009 (i) 1.0 1.23 - 1 Ma 4 01 130 (e) sec-Butylbenzene 200000 (6 5.87 4.62 6.27 J tert-Buty/benzene 130 (e) 200000 (e) - - -10 10 10 1-0 104,000 17500 (a) 15,000 200,000 78,000 HYDROCARBONS (mg/L) NWTPH-HCID 12

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PHASE III RI

EPA Method SW8290

Total TEQ

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

MTF MTF MTF MTF MTF SCREENING CRITERIA National Recommended Water Quality Criteria Risk-Based Concentration Sample Identification LW19S LW19S LW19\$ LW20S LW20S Construction Volatilization Laboratory Identification Date Collected Consumption and Excavation to Outdoor Air Specific 406050-12 0408056-08 0411059-01 FZ04M 0402115-02 Occupational Background 6/8/2004 8/9/2004 11/10/2004 2/24/2004 NWTPH-Dx TPH-Diesel Range
TPH-Motor Oil Range 6.15 5.32 5.4 6.77 0.5.9 1.66 0.5.9 1.06 NWTPH-G TPH-Gasoline Range 1.28 0.786 1.3 0.96 1.4 PRIORITY POLLUTANT METALS (mg/L) 0.00014 (g)(\*) 0.15 (0.75) 0.34 (\*) 0.15 (\*) 0.00014 (\*) Arsenic (7060) 18 (j) 0.34 0.15 15 0.0393 0.0406 0.0406 0.04 0.0204 Chromitim (6010) 0.011 (k) 25 (k) 0,013 0.29 (1) 0.065 (1) 3433 0.074 0.005 0.005 U 0.0158 0.0149 0.005 U 0.009 341 0.009 0.004 Copper (6010) 53 0.05 (1) 0.011 (I) 0.013 0.01 U 0.002 U 0.159 0.01 U 0.01 U Lead (7421) 0.0025 (\*) 28 323 0.043 (9 0.0007 ()(\*) 0.065 0.0025 (\*) 0.02 0.0001 0.001 U 0.000486 J 0.33 (l) 0.052 (l) 0.052 0.005 U 0.005 U 0.005 U 0.005 U 90.015 Zinc (6010) 0.120 1230 0.1 (I) 0.1 (I) 26 0/12 0.12 26 0.01 U 0.01 U 0.01 U 0.01 U BETX (µg/L) EPA Method SW8021B 200000 5300 (a) -- 51 (g) 200000 (f) 32600 (a) -- 2100 Benzene Ethyltenzene 7.3 29,000 110.000 ---NA ... NA NA NA NA 9.8 104000 17500 (a) 15,000 200,000 78,000 NA NA NA Toluene Xylenes, Total 22,000 ---NA NA NA NA NA DfOXIN/FURANS (ng/L)

7/19/05 NEdmdata/wprod/231\009/132\Phill RI 071905\Phill RI Rpt\_App D Upper GW 1

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NA

Page 10 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRI												
Sample Identification	Orego	n SLVs - Surf	ace Water	Oregon A	mbient Water	r Quality Criteria Fish	National Rec	ommended Water	Quality Criteria	Risk-Based (	Volatilization	Site-	X Dup of LW20S	LW20S	LW20S	X Dup of LW20S	LW20S	LW21S	LW27S
Laboratory Identification				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0402115-01	0406050-11	0408056-09	0408056-01	0411059-02	FZ04Q	FZ04R
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	2/24/2004	6/8/2004	8/9/2004	8/9/2004	11/10/2004	10/28/2003	10/28/2003
SEMIVOLATILES (µg/L)																			
EPA Method SW8270 2,4-Dimethylphenol	42			2120 (a)		850	1		850				3.15 U	2.98 U	3.1 U	3.12 U	2.93 U	5.4	1,2 U
2-Methylnaphthalare	620 (b)		264000 (b)		7 W12								1,05 U	0.992 U		1.04 U	0.976 U	46	120
Acenaphthene	520			1700 (a)	520 (a)	990			990			129 (F309F) (F47F)	1.05 U	1.32	1.5	1.43	1.35	1.2 U	1.2
bis(2-Ethylhexyl)phthafate Carbazole	30	8000	7300Q			2.2	*		2.2				1,05 U 1,05 U	0.992 U 0.992 U	1.03 U 1.03 U	1:04 U 1:04 U	0.976 U 0.976 U	1.2 U 1.2 U	12 U 12 U
Dibenzofuran	3.7				######################################						18-23		1.49	1.24	1.03 U	1.04-0	1.17	12 U	12 U
Di-n-Buty/phthalate	35	800	2,200,000			4500			4500				1.05 U 3.53	0.992 U		2.07	0.976 U 3.24	12 U 1.9	2.3
Flucrene Naphthalene	3.9 620		284,000	2300 (a)	620 (a)	5300	AM STA		5300	680		The second second	3.63 1.05 U	3.64 = 0.992 U	3.86 1.03 U	3.63 1.04 U		100	2.4 U 1.2 U
Pentachlorephendi	15			19 (c)	15 (c)	3,0	19	16	1 W3.0			2000	5.25 U	4.96 U	5.17 U	5.19 U	4.68 🗓	6 Ū	61 U
Phenanthrene	6.3		284000 (b)										2.04	2.38	1.68	1.82	2.37	1.3	1.2 U
Phenol	110			10200 (a)	2560 (a)	1,700,000							21 U	1.98 U	2.07 ∪	2.08 ⊍	1 95 U	LI.	3.7 U
EPA Method SW8270SIM				ĺ				1	1			1	1						
Pentachlorophenol	15	-	1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA NA	NA	NA	NA	NA	NA	NA
PAHs (µg/L)								1											
EPA Method SW8270 - SIM							1		1				l					46	0.40.11
2-Methyinaphthalene Acenaphthene	620 520		284,000	1700 (a)	520 (a)	990		-	990				NA 1.19 J	NA 141	NA 0.956 J	NA 1,21 J	NA 1.14	0.8	0.12 U 1,1
Acenaphthylene	620 (b)		284,000			-			-	HER BOR THE DOCUMENT			0.352	0.39	0.107 J	0.245 J	0.301	0.12 U	0.12 U
Anthracene	13				****	40,000			40,000				0.0932	0.17	0.127 0.0488 U	0.0979 0.049 U	0.0875	0,12 U 0.12 U	0.16 s 0.12 U
Benzo(a)anthracene Benzo(a)pyrene	0.027					0.018			0.018	9.1			0.0518 U	0.05 U	0.0488 U	0.049 U	NA 0.0486 U	0.12 U	0.12 U
Benzo(b)fluoranthene	6.16 (d)			-		0.018			0.018				0.0518 U	0.05 U	0.0488 U	0.049 U	0.0486 U	0.12 U	0.12 U
Berizo(g,h.i)perylene						0.018			0.018	* 5.5		gy	0.0518 U 0.0518 U	0.65 U 0.05 U	0.0488 U 0.0488 U	0.049 U 0.049 U	0:0486 U 0:0486 U	0 12 U	0,12 U 0.12 U
Benzo(k)fluoranthene Chrysene						0.018			0.018				0.0518 U		0.0483 U	0.049 U	0:0486 U.	0.12.0	
Dibenzofuran	3.7									-			NA NA	NA	NA	NA	NA	0,57	0.71
Fluoranthene	6.16 3.9			3980 (a)		140 5300			140 5300				0.0518 U 3.52 J	0.06 3.92	0.0878 2.14 J	0.118 2.75 J	0.0486 U 3.46	0.12 U 2.1	0 12 U 2,3
Fluorene Indene(1,2,3-cd)pyrene	3.3							6.54	0.018				0.0518 U	0.05 U	0.0488 U	0.049 U	0.0486 U	0.12 U	0.12 U
Naphthalene	620		284,000	2300 (a)	620 (a)	and the second s				680		200	0.518	0.85	0.39	0.392	0.554	100	0.12 U
Phenanthrene Pyrene	620 (b)		284000 (b)	-100		4000			4000				2:05 J 0:0518 U	2.06 0.05	0.741 J 0.0683	0,93 J 0.0881	1.97 0.0486 U	1.5 0.12 U	0.33 0.12 U
-		-				4000		-	4000				0.0318 8	0.03	0.0003	0.0001	0.0400 5	0.12.0	0.12 0
VOLATILES (µg/L) EPA Method SW8260							1												
1,2,4-Trimethylbenzene	130(e)		200000 (e)						1	1300	***		1 U	1 U	1 U	1 U	1 0	540	1 U
1.3,5 Trimethylbenzene	130 (e)		200000 (e)				9.77			1400			1,0	1 11		fu		120	fù.
4-Isopropyitoluene	9.8 (f) 130		104000 (f) 208,000	5300 (a)		 81 (g)			518 44	- 1700	13,000		1 U 0.85 J	1 U 0.3 Ú	1 U 0.3 U	1 U	1 U 0.38	1 U 1600	1 U
Benzene Ethylbenzene	7.3	-	200,000 200000 (e)	32000 (a)		2100	-		29,000	110,000	13,088		1 U	1 U	1 U	1 U	1 U	940	1 U
Isopropylbenzene	130	P.245	200000 (e)						148,874				5.82 J	7.53	8.52 J			72	12
m,p-Xylene Mothyl (grt-Bullyl Ether	13 (h)		8000 (h)							22000 (i) 31;000	550,000		2 U	2 U	2 U	2 U	2 U	2400 7.5 M	1 U
n-Butylbenzene	130 (e)		200000 (e)		••			-		31,000	150,000		2.78	3.12	2.17	1.76	3.24	8	3.3
n-Propylbenzene	130 (e)												9,94	13.5	10.6	10.5	11.3	110	13
Naphthalene o Xylene	620 1.8		284,000 8000 (h)	2300 (a)	620 (a)			a de Bullera C		680 22000 (i)			1 U	1 U	1 U	1 U	1 U 1.3	190 770	5 U
sec-Butylbenzene	130 (e)		200000 (e)			**************************************			PARTICIPATION OF THE PARTICIPA		***		5.19	6.65	5.55 J	4.41 J	5.26	1 U	4
tert-Butylbenzene	130 (e)		200000 (e)									All and the second	1 1 1 0	a u	2 - DU	7.00.00 DU	10	1 U	and the
Toluene	9.8	**	104,000	17500 (a)		15,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	72	1 U
HYDROCARBONS (mg/L)									1										
NWTPH-HCID									1										*14
Gasoline Diesel				2025-64-32						12			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Lifebrie				CHARLES SERVICE						Carried Tolk Control			1975		, , , , , , , , , , , , , , , , , , ,				THE STATE OF THE S

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Page 12 of 50

## BZTO104(e)023514

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTE	MTF	MTF	MTF	MTF	MTF
							SCREENING CRIT	ERIA					İ						
		SLVs - Surf	ace Water	Oregon A	mblent Water	<b>Quality Criteria</b>	National Reco	ommended Water (	Quality Criteria	Risk-Based C	oncentration		1 x			X			
Sample Identification:					Fresh	Fish				Construction	Volatilization to Outdoor Air	Site- Specific	Dup of LW20S 0402115-01	LW20S 0406050-11	LW20S 0408056-09	Dup of LW20S 0408056-01	LW20\$ 0411059-02	LW21S FZ04Q	LW27S FZ04R
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	Occupational	Background	2/24/2004	6/8/2004	8/9/2004	8/9/2004	11/10/2004	10/28/2003	10/28/2003
NWTPH-Dx						<del></del>			<u> </u>	İ									
TPH-Diesel Range													6.29	10.7	9.21	8.43	6.45	4.3	4.4
TPH-Mojor Oil Bunge		-		1.0								FB-8-50	886.0	0.4983	0.511 U	0.528 L	2.37	0 a U	0.5 U
NWTPH-G									ł			ļ	l						
TPH-Gasoline Range	-	***			-			-		12			1.23	0.981	0.783	0.576	1.21	24	1.6
PRIORITY POLLUTANT				l															
METALS (mg/L)																			
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0188	0.0293	0.0317	0.031	0.0336	0.025	0.038
Chromium (6010)	0.011 (k)		25 (k)	0.29 (I)	0.065 (I)	3433	0.57	0.074				0.005	0.0123 J	0.0133	0.014	0.0176	0.005 ∪	0.005 U	0.005 U
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009	CONTRACTOR OF THE RESERVE OF THE RES			0.004	0.01 U	0.01 U	0.605 J	0.01 U		0.005	0.002
Lead (7421)	0.0025 (*)	.28	323	0.043 (i)	0.0007 (1)(*)		0.065	0.0025 (*)			- 14	0.02	0.000677 J	0.000105		The second of the second		0.005	THE PARTY OF THE P
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6	CONTRACTOR CONTRACTOR		0.01	0.016	0.005 L				0.01 U	0.01 U
Ziric (6010)	0.120	105	1230	-0.1 (I)	0.1 (f)	26	0.12	0.12	26	66 (84,000)		0.015	0:01-0	0 01 U	0.01 U	0.0211	. 0.01 U	0.012	800,0
BETX (µg/L)																			
EPA Method SW8021B																			
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA NA	NA NA	NA	NA	NA_	NA	NA NA
Ethylbenzene	7.3		200000 (f)	32000 (a)	** 11.9	2100			29,000				NA NA	NA .	ŊA	NA	NA NA	NA.	NA
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000			NA.	NA	NA NA	NA.	NA	NA	NA
Xylenes, Total	13 (h)		8000 (h)	4.	٠,					22,000			NA.	NA	NA NA	NA .	NA.	NA	NA.
DIOXIN/FURANS (ng/L)										1									
EPA Method SW8290										1									
Total TEQ	-			-		5.1E-06		-					NA	NA	NA	NA	NA	NA	NA

## BZTO104(e)023515

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTE	MTF	MTF	MTF
							SCREENING CR	TERIA							<del></del>				<del>,</del>
	Oregon	SLVs - Surfa	ce Water	Oregon A	mblent Water	Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based C	Concentration Volatifization	Site-	LW27S	LW28S	LW28S	RW1	RW1	RW1	RW1
Sample identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0406072-01	0402080-02	0406040-01	FY72J	0402086-10	0406074-10	0408025-01
Date Collected	Aquatic	Birds	Mammals		Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/10/2004	2/17/2004	6/7/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004
SEMIVOLATILES (µg/L)																			
EPA Method SW8270				1			Ī	1		İ		ļ							
2,4-Dimethylphenol	42	week to produce the second		2120 (a)		850			850	-			2.9 U	2.89 U	2.91 U				
2-Methylnaphthalene Acenaphthene	620 (b) 520		284000 (b)	1700 (a)	520 (a)	990	# .= .= .	7 -	990				0.966 U 1.25	0.962 U 0.962 U	0.971 U 0.971 U	1. L 1. L	ANTICONOMI DE RIGITIO ACTUAL DE CONTRACTO		<b>1.84</b>
bis(2-Ethylhexyl)phthalate	30	8000	73000	1700 (a)	520 (a)	2.2			2.2				0.966 U	0.962 U	0.971 U	i in			
Carbazole		***					-						0.966 U	0.962 U	0.971 U	1 (	J 0.98 L	0.949 U	1 U
Dipenzofuran	3.7					40.0							0.966 U	0.962 U					
Di-n-Butylphthalate Fluorens	35 3.9	800	2,200,000		-	4500 5300	 		4500 5300				0.966 U 2.68	0.962 U 962 U	0.971 U - 0.971 U	1 L			
Naphthalene	620		284,000	2300 (a)	620 (a)	5300			-	680			0.966 U	0.962 U	0.971 U	5.1	15.6	8,1	7.35
Pentachlorophenol	15		1800	19 (c)	- 15 (c)	3.0	19	= 15	3.0		1.0		4.83 U	4.81 U	4.85 Ü	350	2630	903	160
Phenanthrene	6.3		284000 (b)	140000000000000000000000000000000000000						-	en de la composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della com		0.966 U	0.962 U	0.971 U	1 (			
Phenoi	110			10200 (a)	2560 (a)	1,700,000				****		ALSO TO L	1.93 U	1.92 U	1,94 U	3.7 \	1.96 U	1.9 U	2.0
EPA Method SW8270SIM									1										
Pentachlorophenol	15	**	1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA	NA	NA	NA	NA	NA	NA
PAHs (µg/L)									!	1									
EPA Method SW8270 - SIM									1	1									
2-Methylnaphthalene	620		284,000	ecateratera	ALL CONTRACT TO SERVER								NA .	NA	NA	NA NA	NA	NA	NA
Acenaphtheria Acenaphthylene	520 620 (b)		284,000	1700 (a)	520 (a)	990	-		990-		J		1,24 0,21	0.0482 UJ 0.0482 UJ	0.05 U 0.05 U	NA NA	NA NA	r≐ = NA NA	NA. NA
Anthracene	13					40,000			40,000		的物本基本		0.06	0.0482 UJ	0.05 U		NA NA		NA n
Benzo(a)anthracene	0.027			-		0.018			0.018	9.1	CONTRACTOR SECTIONS		0.05 U	0.0482 UJ	0.05 U	NA NA	NA	NA	NA.
Benzo(a)pyrene Benzo(b)fluoranthene	0.014					0.018 0.018	-		0.018 0.018	0.63		**	0.05 U 0.05 U	0.0482 UJ 0.0482 UJ	0.05 U 0.05 U	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)parylene	6.16 (d)					0.016			0.014				0.05 U	0.0482 UJ			NA NA		, NA
Benzo(k)fluoranthene			-		**	0.018	-		0.018	-			0.05 U	0.0482 UJ	0.05 U	NA.	NA.	NA	NA NA
Chrysene						0,018					20	3-11	0.05 U	0.0482 UJ		NA NA	,NA	NA . NA	NA NA
Dibenzofuran Fluorantiene	3.7 6.16			-3960 (a)		140			140				NA 0.05 U	NA 0.0482 UJ	NA 0.05 U	NA NA	NA NA	NA NA	NA NA
Fluorene	3.9	51250MH 10099E				5300	**	-	5300				2.89	0.0482 UJ	0.0599	NA	NA	NA	NA_
Indepo(1,2,3-cd)pyrene	重要是在	<b>编-</b> 组集	A COLOR STORY			0.018			0.018				0.05 U	0.0482 UJ	0.05.0	NA.	NA.	NA	NA.
Naphthalene Phenanthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)					680			1.28 0,29	0.0675 J 0.0482 UJ	0.05 U 0.05 U	NA NA	NA NA	NA NA	NA NA
Pyrene	- 620 (D)	-				4000			4000		# F/## CENTRY - ## 022		0.05 U	0.0482 UJ	0.05 U	NA NA	NA NA	NA	NA NA
							ĺ												
VOLATILES (µg/L) EPA Method SW8260								1				ŀ							
1,2,4-Trimethylbenzene	130(e)	44	200000 (e)							1300		]	1 U	1 U	1.0	170	180	226	349 J
1,3.5 Primethy benzene	130 (e)		200000 (e)							1400			- 1 U	1.U	1 0	31	55.2	66.6	83.6 3
4-Isopropyitoluene	9.8 (f)		104000 (f)	1000 (41					51	1700	25 000		1 U 0 3 U	1 U 0.4 U	1 U 0.3 U	3.6 4.9	5.2 7.42	5.98 6.78	6.33 J 8.67 J
Benzene Ethylbenzene	130 7.3		200,000 200000 (e)	32000 (a)		2100			29,000	110,000	13,000		1 U	0.4 U	1 U	64	106	90.7	192 J
Isopropylbenzerie	130		200000 (e)										6.97	1 U	1964 T.U	34	43.9	35.7	75.2 J
m,p-Xylene	13 (h)		8000 (h)	E11470 BM			-			22000 (i)	and the Cale of		2 U	2 U	2 U	62	45.6	110	299 J
Methyl terf-Bulyl Ether n-Bulylbenzene	130 (e)		200000 (e)				-			31,000	550,000		1 U 2.24	1 U 1 U	1 U 1 U	NA: 4.7 M		4.07	3.86 J
n-Burylonzene n-Propylonzene	130 (e)		200000 (e)										9.41	iΰ	iŭ	40		57,3	58 J
Naphthalene	620		284,000	2300 (a)	620 (a)	-	-			680			1 U	1 U	1 U	13	27.6	16.7	17.6 J
D-Xylene:	1.6		8000 (h)							22000 (i)			2.24	1.0	1 U	90	142 12.9	130 10.5	294 J 12.3 J
sec-Butylbenzene tert-Butylbenzene	130 (e) 130 (e)		200000 (e) 200000 (e)	-									2.24	1 U			1.15	1.95	
Toluene	9.8		104,000	17500 (a)		15,000	-	- A	200,000	78,000			1 U	1 U	1 U	1 U		1 U	1.6 J
HYDROCARBONS (mg/L)											ĺ								
NWTPH-HCID			İ																
Gasoline				GANGERONALISM		-				12		No. 128-1 cate of transcens	NA INA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Diesel			100									Home Market and			TO STATE OF THE PARTY OF THE PA		NA STATE	and compared the	NAM-

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Page 14 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MITE
							SCREENING CRIT	ERIA											
	Oregon	SLVs - Surf	ace Water	Oregon A	mblent Wate	r Quality Criteria	National Rece	mmended Water	Quality Criteria	Risk-Based C	oncentration	1	1						
Sample Identification:						Fish				Construction	Volatilization	Site-	LW27S	LW28S	LW28S	RW1	RW1	BW1	RW1
Laboratory Identification:	i			Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0406072-01	0402080-02	0406040-01	FY72J	0402086-10	0406074-10	0408025-01
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/10/2004	2/17/2004	6/7/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004
NWTPH-Dx												i	1						
TPH-Diesel Range													6.95	0.242 U	0.331	5.8	11.2 J	NA.	6.12
TPH-Motor Oil Range		温馨 辣							-			20 miles	0 498 LI	0.484 Ú	. 0.813 U	05 U	1.22 J	NA NA	0.51 U
NWTPH-G									1										
TPH-Gasoline Range									_	12			1.66	0.100 U	0.100 U	7.0	6.3	NA	5.48
										i -				0.100	0.100		0.0		5.15
PRIORITY POLLUTANT	1																		
METALS (mg/L)									1			!							
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0243	0.001 U	0.001 U	0.005	0.00382	0.0118	0.006
Chromium (6010)	0.011 (k)		25 (k)	0.29 (i)	0 065 (1)	3493	0.57	0.074				0.005	0.0144	0.005 U	0.005 ∪	0.005 U	0.0093	0.0382	0.005 U
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009				0.004	0.01 U	0.01 U	0.01 U	0.005	0.0172	0.0286	0.01 U
Lead (7421)	0.0025 (*)	28	323		0.0007 (')(*)	7 (20)	0.065	0.0025 (*)				0,02	0:0001 U	0.0001. U	0.000195	0.001=U	0.0005	0.00818	0.000111
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (f)	4.6	0.47	0.052	4.6		WAY TO DESCRIPT THE AND THE AN	0.01	0.005 U	0.005 U	0.0094	0.01 U	0.005 U	0.0199	0.005 U
Zinc (6010)	0.120	1.05	1230	B.1 (I)	0.1 (1)	26	0.12	0.12	25			0.015	Ø 01 U	0:01 U	0.01 U	0.01	0.01 U	0.102	0,0244
									İ	1									
BETX (μg/L) EPA Method SW8021B										1									
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA.	NA
Ethylbenzene	7.3		20000041	32000 (a)	***	21(9)			29,000	110,000	13000		NA NA	C-STATE NAMES	IVA	NA NA	NA NA	NA NA	NA.
Toluene	9.8		104000	17500 (a)		15.000			200,000	78,000		CONTRACTOR CONTRACTOR	NA	NA.	NA NA	NA	NA NA	NA NA	NA NA
Xylenes, Total	13 (h)		8000 (h)			10,000		the second	200,000		400	7 (8) (But 4:)	NA.	No.	NA H	NA.	NA NA	NA NA	NA.
THE PERSON NAMED OF THE PE			5050-(6)				AL-PRODUCT - SEE - DECEMBER - SEE	to the same the same	man and anythe Libert Lines	+ demonstrated		11 - 200 - 110 - 200 - 200 C	TO THE STREET STREET STREET			- Annie de la company de la co			THE PARTY OF THE P
DIOXIN/FURANS (ng/L)																			
EPA Method SW8290						ĺ				l									
Total TEQ						5.1E-06							NA	NA	NA [	0.0028	NA	NA	0.0014

Page 15 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

												MTF	BTTF	BITE	BTTF	впт	BTTF	ВПЕ	BTTF
						SCREENING CR													
CI- Id	Oregon	SLVs - Surface Water	Orego	n Ambient Water		National Rec	commended Water	Quality Criteria		Concentration	Site-	BW1	C14100 4	GW23-1	GW24-1	011/04 0	011105.4	GW26-1	GW27-1
Sample Identification: Laboratory Identification:			Fresi	h Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Specific	0411066-11	GW22-1 0108238-05	0108238-07	0109006-02	GW24-2 0109006-03	GW25-1 0108238-06	0108238-08	0109006-04
Date Collected:	Aquatic	Birds Mamma			Only	CMC (Acute)	CCC (Chrenic)	Only	Worker	Occupational	Background		8/31/2001	8/31/2001	9/4/2001	9/4/2001	8/31/2001	8/31/2001	9/4/2001
SEMIVOLATILES (µg/L)									1										
EPA Method SW8270																			
2,4-Dimethylphenol	42		2120 (	a)	850			850	 	e		3.02 U	3.00 U	3.00 U	3.00 U				
2 Methylnaphthalene Acenaphthene	620 (b) 520	⇒ 284000	1700 (	a) 520 (a)	990			990	18 MF 18 1			1.02 1.01 U	1.00 U	1.00 U 1.00 U	1.00 U 1.00 U		1.00 U		
bis(2-Ethylhexyl)phthalate	3.0	8000 73000		a, 520 (a)	2.2			2.2				1.01 U	100 0	1.00 U					
Carbazole							-					1.01 U	1.00 U	1.00 U	1.00 U				1.00 U
Dibenzofuren	3.7									计学系		1.01 U	1.00 U	1,00-U	1-00 U				
Di-n-Butylphthalate	35	800 2,200,0			4500 5300			4500 5300				1.3 1.01 U	1.00 U	1.00 U	1.00 U	permission of the substitution of	man and the second seco		1.00 U
Fluorene Naphthalene	3.9 620	- 264.00	2300 (		5300			5300	680	700		3.61	1,00 U	1.00 U	1.00 U				1.00 U
Pentachiorophenol	15			15 (c)	3.0	19	16	3.0		201		123	5.00 U	5.00 U					
Phenanthrene	6.3	- 284000			WARREN CARRENT COMMUNICATION			E STORT HORBITAL AND A PARKETS A			1	1.01 U	1.00 U	1.00 ∪	1.00 U		1.00 L		1.00 U
Phenol	110	Agreement of	10200	(a) 2560 (a)	1,700,000							2.01 U	-1,00 U	1.00 U	1.00 U	1,00 U	1.00 U	1.00 U	1.00 U
EPA Method SW8270SIM	1					1		i											
Pentachlorophenol	15	1800	19 (c)	) 15 (c)	3.0	19	15	3.0	-			NA.	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
DALL- ( -// )												ł							
PAHs (µg/L) EPA Method SW8270 - SIM																			
2-Methylnaphthalene	620	- 284,00			-	-				***		NA.	NA	NA	NA	NA	NA_	NA	NA
Acenaphthene	520		1700 (8	a) 520 (a)	990			990				NA.	0.220	0.460	0.0500 U			NA NA	0,0600 U
Acenaphthylene	620 (b)	284,000										NA	0.0500 U	0.340	0.0500 U	0.0500 U	0.0500 U	NA NA	0.0500 U
Anthracene Benzo(a)anthracene	0.027				40,000 0.018			40,000 0.018	9.1			NA NA	0.0500 U 0.0500 U	- 0.0800 0.0500 ∪	0.0500 U 0.0500 U		0.0500 U 0.0500 U	NA NA	0.0500 U 0.0500 U
Benzo(a)pyrene	0.014		190728		0.018		F. B. F. B. B.	0.018		- 14 (4)		NA NA	0.0500 U	0.0500 J	0.0500 U	0.0500 U		NA	0.0500 U
Benzo(b)fluoranthene	6.16 (d)				0.018			0.018				NA.	0.0500 U	0.0500 U	0.0500	0.0500 U	0.0500 U	NA	0.0500 U
Benzo(g hil)perylene											- 00	NA.	0.0500.11	# 10.0500 U	0.0500 U	0.0500 U	-0.0500-U		0.0500 U
Benzo(k)fluoranthene	-				0.018 0.018			0.018 0.018		6 Te St. 12		NA NA	0.0500 U 0.0500 U	0.0500 U 0.0500 U	0.0500 U 0.0500 U		0.0500 U 0.0500 U	NA NA	0.0500 U 0.0500 D
Chrysene Dibenzofuran	3.7		-		0.016		The second second	U.U.IO				NA NA	NA	NA NA	NA NA	NA	0:0500 Q	NA	NA
Fluoranthene	6,16		3980 (	1)	140			140				NA NA	0.0500 U	0.170	0.0500 U		0.0500 Ü		0.0600 U
Fluorene	3.9		and the second		5300	AL TOTAL ENGINEER HOUSE	CI days, first initial columns.	5300		mannesses and soldings of		NA NA	0.0500 U	0.660	0.0500 U	0.0600 U	0.0500 U	NA	0.0500 U
Indeno(1,2,3:ed)pyrene	000	40	0000	500(-)	0.018			0.018	680			NA.	0.0500 U 0.410	0:0500 U 1.06	0.0500 U 0.0500 U	0.0500 U		NA 3 NA	0.0500 U
Naphthalene Phenanthrene	620 620 (b)	284,000		a) 620 (a)	COMPANY AND COLUMN TO SERVICE				680		76 W 44	NA NA	0.0600	0.440	0.0500 U	0.0500 G	0.280 0.0500 U		0.0500 U
Pyrene	Aleks Market And Provide				4000			4000	-		TOTAL CONTRACTOR CONTR	NA	0.0500	0.240	0.0900	0.0500 ∪	0.0500 U	NA	0.0500
·			1			Į.													
VOLATILES (µg/L) EPA Method SW8260							İ	1	I										
1,2,4-Trimethylbenzene	130(e)	- 200000 (	a)					**	1300			84.4	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
1,3,5-Trimethylbenzene	130 (e)			STATE OF		10000	CMC 14 34 3 37		1400	240		22,5	0.200 U	0.200 U	0,200 U	0.200 U	0.200 U	0.200 ປ	0.200 U
4-Isopropylloluene	9.8 (f)	104000 (		ericker er var der er er er								2.08	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Benzene Ethylbonzone	130 7.3	200,000 200000 (		9)	51 (g) 2100			29.000	1700 110,000	13,000	UFA	6.12 31.8	0.200 U 0.200 U	0,200 U 0,200 U	0.209 U 0.200 U	0.200 U	0.200 U 0.200 U	0.200 U 0.200 U	0.200 U 0.200 U
Ethylbenzene Isopropylbenzene	130	200000 (		a)				29,000	110,000		rrass	31.8]	0.200 U	13.6	0.200 U	0.200 U	0.200 U	3.37	0.200 U
m,p-Xylene	13 (h)	8000 (h					-		22000 (i)			40.3	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Methyl tert Butyl Ether									31,000	550,000	7000	10	NA:	NA.	NA NA	NA .		NA	NA NA
n-Butylbenzene	130 (e)	200000 (			#11-W		-					17.2	0.200 U 0.200 U	2.17	0.200 U 0.200 U	0.200 U	0.200 U	0.680 4.63	0.200 U
n-Propylbenzene Naphthalene	130 (e) 620	200000 ( 284,000	2300 (a				3 (SECTION )		680			17.2	0.200 U 0.690	2.34	0.500 U	0.200 U 0.500 U	0.200 U 0.700	0.730	0.200 U 0.500 U
o Xylene	1.8	- 9000 (h)					7 A 5 A		22000 (i)			47.8	0.200 U	0200 U	0.200 U	0.200 U	0.200 U	0.200°U	0.200 U
sec-Butylbenzene	130 (e)	200000 (	)	-								4.37	0.260	5.58	0.200 ∪	0.200 U	0.200 U	0.810	0.200 U
ten Butylbenzene		200000 (			4.6		-					. 7.8	0,610	1.41	0.200 U		0.240	0.200 U	0.200 U -
Toluene	9.8	104,000	17500 (a	a)	15,000			200,000	78,000	***		1 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
HYDROCARBONS (mg/L)			1			[													
NWTPH-HCID						[													
Gasoline	E-mail: management in								12		constant approximation	NA	0.25 U	Gasoline	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Diesel		3 · · · · · · · · · · · · · · · · · · ·										NA NA	0.63 U	Diesel	0,63 U	0.63 ⊍	0,63 U	0.63 U	0.63 U
'			•				•	•		'	'	•							

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Page 16 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	BTTF	BTTF	BITE .	BTTF	BTTF	ВПЕ	BITF
							SCREENING CR								_					
	Oregon	SLVs - Suri	ace Water	Oregon Ar	nblent Wate	r Quality Criteria	National Recommended Water Quality Criteria				Concentration		7							
Sample Identification:				١		Fish				Construction	Volatilization	Site-	RW1	GW22-1	GW23-1	GW24-1	GW24-2	GW25-1	GW26-1	GW27-1
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammais	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0411066-11 11/11/2004	0108238-05 8/31/2001	0108238-07	0109006-02 9/4/2001	0109006-03 9/4/2001	0108238-06 8/31/2001	0108238-08 8/31/2001	0109006-04 9/4/2001
	Aquano	Dirus	IVIATITITATS	Acuie	CHROTIC	City	CMC (Addie)	CCC (CINOTIC)	City	VVOIKei	Сссиранонал	Dackground	11/11/2004	6/31/2001	8/3//2001	3/4/2001	9/4/2001	0/31/2001	0/31/2001	8/4/2001
NWTPH-Dx														l						
TPH-Diesel Range	erikayisi aganekata				TA SERVER COMME					-			NA NA	NA NA	4.66 0.500 U	NA	NA NA	NA NA	NA	NA
TPH-Moter Cil Hange	120 55		30.00		None of the					•		N Drw	NA	, NA	L USIN C	NA	NA:	NA .	-NA-	NA.
NWTPH-G																				
TPH-Gasoline Range								-	-	12			NA.	NA.	1.65 J	NA	NA	NA	NA	NA
														1						
PRIORITY POLLUTANT																				
METALS (mg/L)			_					0.41.41		i				0.0248	0.0353	0.00521	0.019	0.00658	0.0315	0.00500 U
Arsenic (7060) Chromium (6010)	0.15 (j) (*) <b>0.011 (k)</b>	18 (j)	6 25 (k)	0.34 0.29 (l)	0.15 0.065 (i)	0.00014 (g)(') 3483	0.34 (*) 0.57	0.15 (*)	0.00014 (*)			1.5 0.005	0.00526	0.0248 0.00500 U	0.0353 0.00500 U	0.00521	0.019 0.00500 U	0.00500 U		0.00500 U
Copper (6010)	0.009	341	∠5 (K) 53	0.05 (1)	0.011 (i)	3433	0.013	0.009				0.004	0.0244j	0.0100 U	0.0100 U	0.0577	0.0100 U	0.0100 U		0.0100 U
Lead (7421)	0.003	28	323		0.0007 (1(*)	AND ASSESSMENT OF THE PARTY OF	0.065	0.003	Nach Brand			0.02	0.00434	0.00200 U	0.00200 U	0.00940	0,00200 U	0.00200 (		0:0100 U
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (1)	4.6	0.47	0.052	4.6	SEACH SERVICE SERVICE		0.01	0.005 U	0.00500 U	0.00500 U	0.00740	0.00500 U	0.00500 L		0.00500 ⊔
Zinc (6010)	0.120		1230	0,1 (1)	0.1 (1)	26	0.12	0.12	26			0.015	0.0394	0.0100 U	0.0100 €	0.0551	0.0100 U			0.0100 U
241771122211222112222222222222222222222		www.rms.come.	ON THE PROPERTY.	5-45M -356F-555			St. C. Share Confidence or an other construction				778-77									
BETX (μg/L)																				
EPA Method SW8021B										i										
Benzene	130		200000	5300 (a)		51 (g)	THE WAY THE WAY TO SEE THE SEE		51	1700	13000		NA NA	NA	NA	NA.	NA	NA	NA	NA
Ethy benzene	7.3		200000 (f)	32000 (a)		2100			29,000	17.0,000			NA s	LE SINA	NA NA	NA _	NA	NA_	NA	NA
Toluene	9.8	material control	104000	17500 (a)		16,000			200,000	78,000			NA	NA NA	NA NA	NA	NA	NA	NA NA	NA.
Xylenes, Total	13 (h)		8000 (h)	E Colorado mar						22,000			NA.	NA	NA.	NA	NA ,	NA.	NA	NA
DIOXIN/FURANS (ng/L)																				
EPA Method SW8290													1							
Total TEQ						5.1E-06						***	0.006964	NA	NA	NA	NA	NA	NA	NA
1000124						J 00			1	ļ.	'							, , ,		

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BTTF	BTIF	BUF	BTTF	BITE	BUF	BTTF	BITE
					·····		SCREENING CRI					-								
Sample identification		SLVs - Surfa	ce Water	Oregon A	mbient Water	Quality Criteria Fish	National Rec	ommended Water	Quality Criteria	Risk-Based Construction	Concentration Volatilization	Site-	SCH56-GW	SCH60-GW	SCH61-GW	SCH62-GW	SCH63B-GW	BT-01 -GW	BT-02 -GW	BT-03 -GW
Laboratory Identification Date Collected		Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker		Specific Background	0110064-01	0110064-02 10/9/2001	0110064-03 10/9/2001	0110064-04 10/9/2001	0110079-01 10/10/2001	0207039-01 7/8/2002	0207039-02 7/8/2002	0207039-03 7/8/2002
SEMIVOLATILES (µg/L)	A Aquanc	BRUS	Warmais	ACDE	Grionic	Olly	CIVIC (ACUIE)	occ (critatic)	T Only	VVOIKei	Оссиранона	Background	10/9/2001	10/8/2001	10/9/2001	10/9/2001	10/10/2001	11012002	7/8/2002	7/8/2002
EPA Method SW8270									1				}							
2,4-Dimethylphenol 2:Mathylnaphthalena	42 520 (b)		 284000 (b)	2120 (a)		850			850				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthene	520			1700 (a)	520 (a)	990		-	990	-			NA NA	NA NA	NA	NA	NA	NA NA	NA	NA NA
bis(2-Ethylhexyl)phthalate Carbazole	3.0	=6000 →	73000			2,2			2,2		ja ja j.w.j.d.ta 		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA. NA	NA NA
Dibenzofuran	3,7												INA ≟NA	NA NA		NA NA		NA NA		NA NA
Di-n-Butylphthalate	35 3.9	800	2,200,000			4500 5300			4500 5300				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA
Naphthalene	620	-	284,000	2300 (a)	620 (a)	0370				680			NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pentachtorephenol Phenanthrene	15 6.3		1800 284000 (b)	19 (c)	15 (c)	3.0	19	15	3.0				NA:	NA NA	NA NA	NA NA	NA. NA		NA.	NA
Phenol	110		284000 (b)	10200 (a)	2560 (a)	1,700,000							NA NA	and the same of th			NA NA	NA NA-	NA NA	NA NA
EPA Method SW8270SIM																				
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	NA	NA	NA	NA	NA	NA	NA
PAHs (µg/L)							1													
EPA Method SW8270 - SIM																				
2-Methylnaphthalene Acenaphthene	620 520		284,000	1700 (a)	520 (a)	-990			990				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene	620 (b)		284,000	-					-		***		NA.	NA	NA.	NA NA	NA NA	NA	NA	NA
Anthracene Benzo(a)anthracene	0.027					40,000 0.018			40,000 0.018	9.1			NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	0.014					0.018			0.018	0.53			NA.	NA	NA NA	NA.	NA NA	NA.	, NA	NA III
Benzo(b)fluoranthene Benzo(g;h,i)perylene	6.16 (d)		-			0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene		**	-			0.018		-	0.018				NA	NA NA	NA NA	NA	NA.	NA	NA	NA
Chrysene Dibenzofuran	3.7					0.018		-	0.018				NA I NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA
Fluoranthene	6.16			3980 (a)		140			140				NA.	NA NA	NA	NA NA	NA.	NA.	NA :	NA .
Fluorene indénor1,2,3-cd/pyrene	3.9			-		5300 0.018		-	5300 				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA ■ NA
Naphthalene	620	CONTRACTOR STREET	284,000	2300 (a)	620 (a)					680			NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene Pyrane	620 (b)		284000 (ь)			4000			4000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.
VOLATILES (μg/L)																				
EPA Method SW8260																				
1,2,4-Trimethylbenzene	130(e) 130 (e)		200000 (e)	-						1300			0.540 0.240	NA NA	356	NA NA	NA NA	NA NA	NA NA	NA NA
1,3,5-Trimethylbenzene 4-Isopropyttoluene	9.8 (f)		200000 (e) 104000 (f)			-	7. P. P. S. S. C.			1400			0.560	NA. NA	21.3	NA	NA NA	NA NA	NA NA	NA NA
Berzene Ethylbenzene	130 7,3	4.4	200,900 200000 (e)	5300 (a) 32000 (a)		51 (g) 2100	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		51 29.000	1700 110,000	13,000		0.210 3.33	NA NA	9,73	NA NA	NA NA	NA NA	NA NA	ŊA
Isopropyberzene			200000 (e)			2100			29,000	110,000			23.4	NA NA	65.8		NA NA	NA NA	NA NA	NA NA
m.p-Xylene	13 (h)	 	8000 (h)			- 	-			22000 (i)			0.400 U NA	NA NA	0.400 U NA	NA.	NA NA	NA NA	NA NA	NA NA
Methyl tert Butyl Ether	130 (e)	-	200000 (e)			**					.550,000		10.0	NA NA	72.4	NA NA	NA	NA NA	NA NA	NA NA
n-Propylbenzene	130 (e)		200000 (e)	2200 (*)	620 (=)					000			79.1	NA NA	191	NA		NA,	I I I NA	NA NA
Naphthalene b-Xylene	620 = 1.8		284,000 8000 (h)	2300 (a)	620 (a)				-	680 22000 (i)			39.7 0 200 U	NA NA	256 0.200 U	NA NA	NA NA	NA NA	NA NA	NA NA
sec-Butylbenzene	130 (e)		200000 (e)		-					**			6.81	NA	31.5	NA	NA	NA NA	NA	NA
terl-Butylbenzene Toluene	130 (e) 9.8	170	200000 (e) 104,000	17500 (a)	-	15,000	-		200,000	78,000			0.560 0.280	NA NA	0.200 U 0.970	NA NA	NA NA	NA NA	NA NA	NA NA
HYDROCARBONS (mg/L)			. [	* * *							ļ	,								
NWTPH-HCID																				
Gasoline					THE PERSON NAMED IN COLUMN	Approximation in the same		-	Estado Melos tomo 1984	12	MERCISACION NOT THE	in APROAGONOS I SARROS I	NA NA	NA NA	NA	NA	NA	NA	NA	NA
Diesel												W 02 W	NA	NA NA	NA.	NA .	ŊA	NA.	- NA	NA

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#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BTTF	BTTF	BTTF	BITE	BITE	BTTF	BITE	BITE
1							SCREENING CRI	TERIA .					<del> </del>							
	Oregon	SLVs - Surfa	ce Water	Oregon A	nbient Water	Quality Criteria		ommended Water	Quality Criteria	Risk-Based Concentration			1							
Sample Identification:						Fish				Construction	Volatilization	Site-	SCH56-GW	SCH60-GW	SCH61-GW	SCH62-GW	SCH63B-GW	BT-01 -GW	BT-02 -GW	BT-03 -GW
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0110064-01	0110064-02	0110064-03	0110064-04	0110079-01	0207039-01	0207039-02	0207039-03
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/9/2001	10/9/2001	10/9/2001	10/9/2001	10/10/2001	7/8/2002	7/8/2002	7/8/2002
NWTPH-Dx								]					ł							
TPH-Diesel Range										-			1.14	0.250 UJ	1.10	0.966	796 J	1.94	0.625	22.2
TPH-Motor Oil Bange					T- 12		F 12 12						0.500 U	0.500 UJ	-0.500 U	0.500, 0	10.0 U	0.500 U	0.500 U	0.500 U
NWTPH-G								1												
TPH-Gasoline Range						_				12			1.21	0.100 U	6.02	0.100 U	NA.	1.87	0.100 U	5.57
PRIORITY POLLUTANT								ŀ		1			l							
METALS (mg/L)																				
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	NA_	NA NA	NA	NA	NA.	NA_	NA NA	NA NA
Chromium (6010)	0.011 (k)		25 (k)	0.29 (I)	0.065 (1)	3433	0.57	0.074		121 CY 127 L		0.005	NA	- NA	ŊA	NA NA	NA NA			NA -
Copper (6010)	0.009	341	59	0.05 (l)	0.011 (l)		0.013	0.009	ANTO-MERCHENCO MENG-MERCO		and the second s	0.004	NA NA	NA.	NA.	NA	NA NA	NA	NA	NA
Lead (7421)	0.0025 (*)	28	323		0.0007 (f)(*)	THE RESERVE	0.065	0.0025 (*)		10 MT+40 ME		0.02	NA .	NA NA	NA	NA	NA NA	NA	NA.	NA.
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	NA NA	NA_	NA	NA NA	NA	NA	NA	NA NA
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	28	*	****	0.015	NA	NA	NA =	NA.	NA	NA NA	NA I	NA
BETX (μg/L)																				
EPA Method SW8021B						4				i										
Benzene	130	_	200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA	NA	NA	0.400 U	0.400 U	0.400 U
Ethylpenzene	7.3		200000 (1)	32000 (a)		2100			29.000	110,000			NA.		NA:	- NA	NA .		0.500 U	0.500 U
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000			NA.	NA	NA	NA	NA	5.43	0.544	0.500 U
Xylenes, Total	13 (h)		8500 (h)							22,000			NA.	ÑA	NA	NA	NA_	1 50 U	1.50 ປ	1.50 U
DIOXIN/FURANS (ng/L)										1	i									
EPA Method SW8290			i							1			Í							
Total TEQ						5.1E-06				-			NA.	NA	NA	NA	NA	NA	NA	NA

Page 19 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BITE	BITE	BTTF	виг	BITE	BTTF	BITE	BITE
	0	SCREENING CRITERIA Oregon SLVs - Surface Water   Oregon Amblent Water Quality Criteria   National Recommended Water Quality Criteria								I Diek Besed (	Concentration						BT-11 -GW			
Sample Identification:	Oregon	SLVS - SUITE	ace water	Oregon A		Fish		ommended water		Construction	Volatilization	Site-	BT-04 -GW	BT-05 -GW	BT-06 -GW	BT-07 -GW	Dup of BT-07-GW	BT-08 -GW	BT-09 -GW	BT-10 -GW
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0207061-04 7/9/2002	0207039-04 7/8/2002	0207061-03 7/9/2002	0207039-06 7/8/2002	0207039-05 7/8/2002	0207039-07 7/8/2002	0207061-02 7/9/2002	0207061-01 7/9/2002
SEMIVOLATILES (µg/L)	riquaro	Diligo	Wallingto	710010	OTHOTHO	Only	ONIO (ricale)	T CCC (CHICHIC)	City	NO.NO.	Occupational	Duungruuna	77072002	770/2002	770/2002	TWEGOL	770/2002	77012002	77072002	77872.002
EPA Method SW8270																				
2,4-Dimethylphenol	42	-		2120 (a)		850	Autorio de California de Cal		850				NA NA	NA	NA	NA	NA NA	NA	NA NA	NA
2-Methylnaphthalene Acenaphthene	620 (b) 520		284000 (b)	1700 (a)	520 (a)	990			990		2750		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
bis(2-Ethylhexyl)phthalate	3.0	8000	73000			2.2	97238		22				NA	NA.	NA.	NA.	NA.	NA I		NA.
Carbazole	3.7				2-60-JH:								NA NA	NA	NA.	NA NA	NA NA	NA NA	NA	NA NA
Dibenzofuran Di-n-Butylphthalate	35	800	2,200,000		AC 200 THEFT.	4500	-	-	4500	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Flyorene	3.9					5300			5300	排制超级			NA.	NA.	NA.	NA NA	NA NA	NA.	ŅĄ	NA
Naphthalene Pentachtorophenol	620 15		284,000 1800	2300 (a) 19 (c)	620 (a) 15 (c)	3.0	19	 15	3.0	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	6.3	***	284000 (b)			-			-				NA.	NA	NA NA	NA NA	NA NA	NA.	NA NA	NA
Phenol	110		4	10200 (a)	2560 (a)	1,700,000							NA	NA NA	NA NA	NA_	NA.	NA.	. NA	NA NA
EPA Method SW8270SIM													İ							
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-	*		NA.	NA	NA	NA	NA	NA	NA	NA
PAHs (μg/L)																				
EPA Method SW8270 - SIM							İ													
2-Methylnaphthalene Acenaphthene	620 520		284,000	1700 (a)	520 (a)	990			990				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene	620 (b)		284,000										NA	NA.	NA.	NA	NA	NA	NA.	NA
Anthracene Benzo(a)anthracene	0.027					40,000 0.018	.,		40,000 0.018	9.1			NA NA	NA NA	NA NA	NA . NA	NA NA	NA. NA	NA NA	NA NA
Benzo(a)pyrene	0.014					0.016			0.018	0.83			NA.	NA A			NA NA	NA NA	NA.	
Benzo(b)fluoranthene	6.16 (d)				78 SOUND NOS	0.018			0.018				NA.	NA	NA	NA NA	NA	NA.	NA NA	NA
Benzo(g:h.i)perylenê Benzo(k)fluoranthene						0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene						0.018			0.018				NA.	NA NA	NA	NA.	NA.	NA-	NA.	NA.
Dibenzofuran Fluoranthene	3.7 6.16			3960 (a)		140			140				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	3.9					5300	-	-	5300				NA.	NA	NA	NA	NA	NA	NA	NA
Indeno(1.2.3-cd)pyrene Naphthalene	620		284,000	0000 (-)	COD (4)	0.018			0.018	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.
Phenanthrene	620 (b)		284000 (b)	2300 (a)	620 (a)					680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA
Pyrene			-			4000	-		4000				NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L)																				
EPA Method SW8260																				
1,2,4-Trimethylbenzene 1,3,5-Enmethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)							1300 1400			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
4-Isopropyltoluene	9.8 (f)		104000 (f)		**			••					NA NA	NA NA	N.A.	NA NA	NA NA	NA NA	NA.	NA
Benzene Ethylbenzene	130 7.3		200,000 200000 (e)	5300 (a) 32000 (a)		<b>51 (g)</b> 2100			29.000	1700 110,000	13,000		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Isopropyibenzene	130		200000 (e)	32000 (a)		2100	- 1 A 1 A 1		29,000	110,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
m.p-Xylene	13 (h)		8000 (h)				TO STATE OF STATE AND ADDRESS.			22000 (i)	ST DE PERME	Surface Tibel Souther	NA	NA NA	NA	NA NA	NA NA	NA	NA.	NA
Methyl terf Butyl Ether n-Butylbenzene	130 (e)		200000 (e)	- I						31,000	550 000		NA NA	NA NA	NA NA	NA <sup>1</sup>	NA NA	NA NA	N <u>A</u> NA	NA NA
n-Propylbenzene	130 (e)	F ME I	200000 (e)										NA .	NA.	NA	NA.	NÁ NÁ	NA.	NA HIENA	NA.
Naphthalene o-Xylene	620 1.8	in minute production to provide	284,000 8000 (h)	2300 (a)	620 (a)		-	-		680 22000 (i)			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
sec-Butylbenzene	130 (e)	-	200000 (e)		-					62000 (1)		-	NA NA	NA.	NA NA	NA NA	NA.	NA	NA.	NA
tert-Butylbenzene	130 (e)		200000 (e)			45.000			900.000				NA	NA .	NA.		NA I		NA.	NA .
Toluene	9.8		104,000	17500 (a)		15,000	-	-	200,000	78,000			NA	NA	NA	NA	NΑ	NA	NA	NA
HYDROCARBONS (mg/L)			ľ																	
NWTPH-HCID Gasoline										12			NA	NA	NA	NA	NA.	NA	NA	NA
Diesel: 2				15-6-0									an in Na	NA I	NA.	, ja	NA NA	NA NA	NA	NA NA
			- 1				T		1		- 1									_

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### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

BITE BITE BITE BITE BITE SCREENING CRITERIA Risk-Based Concentration BT-11 -GW Sample Identification BT-05 -GW BT-06 -GW BT-07 -GW Dup of BT-07-GW BT-08 -GW BT-09 -GW BT-10 -GW Fresh CCC (Chronic Laboratory Identification Fresh Fresh Consumption and Excavation to Outdoor Air Specific 0207061-04 7/9/2002 0207039-04 7/8/2002 0207061-03 7/9/2002 0207039-06 0207039-05 7/8/2002 0207039-07 0207061-02 7/9/2002 0207061-01 Date Collected: 7/8/2002 7/8/2002 7/9/2002 Background NWTPH-Dx TPH-Diesel Range 5.61 1.06 1.50 J 2.47 0.500 U 0.500 U 0.500 U 0.500 U 7.45 2.06 J 5.28 0.918 TPH-Motor Oil Range .. ... 0.500 U 0.600 U 0.500 U 0.500 U NWTPH-G TPH-Gasoline Range 5.29 0.981 12.2 0.933 0.981 3.42 0.100 U PRIORITY POLLUTANT METALS (mg/L) 0.15 m (°) 0.34 Arsenic (7060) 18 (i) 0.00014 (g)(\*) 0.34 (\*) 0.15 (1) 0.00014 (\*) 1.5 NA Chromium (6010) 0.011 (k) 25.(k) -0.29 (I) 0.065 (I) 3438 0.074 0.005 NA -Copper (6010) 0.009 0.05 (1) 0.011 (I) 0.013 0.009 0.004 NA NA Lead (7421) 0.0025 (\*) 28-0:043 (i) 0:0007 (l)(\*) 0.02 Nickel (6010) 0.33 (I) 0.120 106 1200 0.1 (I) 0.1 (I) NA NA NA Zinc (6010) 0.12 0.12 26 0:015 BETX (µg/L) EPA Method SW8021B 6300 (a) 51 (g) 13000 0.400 U 0.400 U 0.400 U 0.400 U 200000 1.08 18.6 1.09 0.400 U Benzene 29,000 Ethylbenzene 7.3 - 200000 (n 32000 (a) -2100 110,000 ---6.10 0.500 U 24.9 6.500 U 0.500 U 3.30 0.500 U 0.500 U 104000 17500 (a) 200,000 78,000 4.99 3.40 J 15.6 1.30 J Toluene 15,000 7.83 0.923 -13 (h) 8000 (h) 22,000 ---68.2 1.66 2.91 23.7 1.50 U Xylenes, Total 12.1 1.50 U DIOXIN/FURANS (ng/L) EPA Method SW8290 Total TEQ 5 1F-06 NA

BZTO104(e)023522

Page 20 of 50

Page 21 of 50

#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BTIF	BTIF	BTTF	BITTE	BITF	ВПЕ	BTTF	ÉTTE
		SCREENING CRITERIA																	<del></del>	
	Oregon	SLVs - Surfa	ace Water	Oregon A	nbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration		1						X	
Sample Identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW29\$ FZ04C	LW29\$ 0402080-08	LW29S 0406050-06	LW29S 0408006-06	LW29S 0411047-02	LW30S FZ04E	Dup of LW30S FZ04L	LW30S 0402085-01
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background		2/17/2004	6/8/2004	8/2/2004	11/8/2004	10/27/2003	10/27/2003	2/18/2004
SEMIVOLATILES (µg/L)								l									-			
EPA Method SW8270																				
2,4-Dimethylphenol	42	-		2120 (a)		850			850				3 U	2.94 U 0.979 U	3.02 U	2.91		3.3 U 1.1 L		
2-Methylosohthalene Acenaphthene	620 (b) 520		284000 (b)	1700 (a)	520 (a)	990		-	990				1 U	0.979 U	1.01 U 1.01 U	0.971				
bis(2-Ethylhexyt)phthalate	3.0	8000	73000			2.2			22				TÜ	0.979 U	1.01 U	0.971				
Carbazole	-			LAN TRANSPORT MEMBERS	ACCRECATION OF		and the court of the court	amilian salah salah salah salah salah					1 U	0.979 U	1,01 U	0.971				
Diftenzofuran Di-n-Butylphthalate	3.7 35	800	2,200,000	(A) ** (A)		4500	100 H/L	PERSONAL T	4500				1 0	0.979 U 0.979 U	1.01 U 1.01 U	0.971		1,1 U		
Fluorene	3.9	000	2,200,000	ي سور		5300		100	5300		Total III		nu		1.01 U	0.971			1.5	
Naphthalene	620		284,000	2300 (a)	620 (a)				-	680			1 U	0.979 U	1.01 U	0.971 l	J 1.04 U	1.1 (	1.1 ដូ	0.975 U
Pentachtorophenol.  Phenanthrene	16 6.3		1800	19 (c)	15 (c)	3.0	19	15	8,0			. va	5 U	4.9 U 0.979 U	5.04 U 1.01 U	4 86 1				
Phenantirene Phenol	110		284000 (b)	10200 (a)	2560 (a)	1,700,000 1,700,000							1 U		2:01 U	0.971 U 1.94 U			1.5 2.2 U	1.44 1.95 U
	THE REPORT OF THE PARTY OF THE	Market Printers - Albert To	Marine Contract Contract												200 Table 1 Ta	naza mesi arasana eta raz	ENNERS TRUST VEDES BY ANY P	- PETANATE MARKET PARK	The design of the Company of	
EPA Method SW8270SIM Pentachlorophenol	15		1800	19 (c)	45 (-)	3.0	19	15	3.0				NA.	NA	NA.	NA	NA	NA	NA	NA
rentachiorophenoi	15		1000	19 (0)	15 (c)	3.0	19	15	3.0	_			l NA	INA	NA	NA	NA.	INA	NA.	N.A
PAHs (μg/L)								1					Ï							
EPA Method SW8270 - SIM 2-Methylnaphthalene	620		284.000				İ						0.1 U	NA	NA	NA	NA	0.11 U	0.11 U	NA
Acengothene				1700 (a)	520 (a)	990	i i i i i i i i i i i i i i i i i i i		990				0.1 U	0.0489 UJ	0.05 U	0.05 (		0.84	0.84	0.864
Acenaphthylene	620 (b)		284,000	**			-	**	**			377	0.1 U	0.0489 UJ	0.05 U	0.05 L	J 0.0529 U	0.11 ⊔		0.126
Anthracene	13					40,000			40,000				0.1 U	0 0469 UJ	0.05 U	0.05 1		0.11 U		
Benzo(a)anthracene Benzo(a)pyrene	0.027			-		0.018	-	-	0.018 0.018	9.1 0.63			0.1 U 0.1 U	0.0489 UJ 0.0489 UJ	0.05 U 0.05 U	0.05 L		0.11 U 0.11 U		0.0485 U 0.0485 U
Benzo(b)fluoranthene	6.16 (d)			-		0.018			0.018				0.1 U	0.0489 UJ	0.05 U	0.05 L		0.11 U		0.0485 U
Ber zo(g,h;i)perylene							A area				11200		0.110	0.0489 UJ						0.0485 LI
Benzo(k)fluoranthene Chrysene			-			0.018 0.018			0.018 0.018	and Market and			0.1 U 0.1 U	0.0489 UJ 0.0489 UJ	0.05 U 0.05 U	0.05 L		0.11 U 0.11 U		0.0485 U 0.0485 U
Dibenzofuran	3.7	-			-	0.010		-	- 4016				0.1 U	NA NA	NA	NA	NA	0.8	0.82	NA
Fluoranthene	6,16			3980 (a)		140	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		140				1 q 1 J	0.0489 LU	0.05-0	0.05 (				0.0485 U
Fluorene	3.9			-		5300 <b>0.018</b>			5300 0.018				0.1 U	0.0489 UJ 0.0489 UJ	0.05 U 0.06 U	0.05 L		1.6 0.11 U	1.7 07.1 U	1.38 0.0485 U
Indens(1,2,3-od)pyrene	620		284,000	2300 (a)	620 (a)			**		680			0.1 U	0.0489 UJ	0.05 U	0.06	0.0529 U	0.11 U		0.0485
Phenanthrene	620 (b)		284000 (b)										0.1.U	0.0489 UJ	0.06 U	0.05 (			1.6	
Pyrene		**	**			4000	**		4000		**-	***	0.1 U	0.0489 UJ	0.05 ∪	0.05 L	0.0529 U	0.11 U	0.11 U	0.0485 U
VOLATILES (μg/L)																				
EPA Method SW8260																				
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	130(e) 130 (e)		200000 (e)							1300	-		1 U	1 U	1 U	1 L		1 U		1 U
4-Isopropyitoluene	9.8 (f)		104000 (f)		-	-	-	-					1 U	1 U	1 U	1 U		1 U		1 U
Benzena	130		200,000	5300 (a)		51 (g)	4,010.00	4.4	51	1700	13,000		1 0	0.4 U	0.3 U	0.3 U	0.3-U	1 U	1 0	0.4 U
Ethylbenzene	7.3 130		200000 (e)	32000 (a)		2100			29,000	110,000			1 U	1 U	1 U	1 U		1 U		1 U
Isopropylberizene m,p-Xylene	130 13 (h)		200000 (e): 8000 (h)	-			-			22000 (i)			1 U	1 U 2 U	2 U	1 U 2 U		9.8 1 U	9.6	<b>7.32</b> 2 U
Methyl tert-Butyl Ether							40.00			31,000	550;000	1 - S	i i i i		ar i u	10		1.0	10	
n-Butylbenzene	130 (e)		200000 (e)				-		News			NATE OF STREET	1 U	1 U	1 U	1 U		3.5	3.2 M	3.13
n-Propylbenzene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)					680			1 U 5 U	1 U	1 U	1 U		<b>25</b> 5 U	23 5 U	<b>26.7</b> 1 U
p-Xylene	1.8		284,000 8000 (h)	2000 (a)	0E0 (d)					22000 (i)			1 U	10	1.0	1.0		1.0	The second secon	To:
sec-Butylbenzene	130 (e)	-	200000 (e)										1 U	1 U	1 U	1 U	1 Մ	2.5	2.4	1.64
tert-Butylbenzene	130 (e) 9.8		200000 (e)	17500 (-)		15.000			000.000	70.000	A 8		1 U	. 10	10.	1.0			at U	100
Toluene	9.8		104,000	17500 (a)	**	15,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
HYDROCARBONS (mg/L)								ļ												
NWTPH-HCID																				
Gasoline Diesel		49.000000								12	 6.6 97		NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
¥10.00								1995 By 1895			THE RESERVE OF THE PARTY OF THE				HAT THE PARTY NAMED IN	THE REAL PROPERTY.	FIN STREET	es and water		10 DA

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#### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BITE	BUF	BTTF	ВПЕ	BTTF	BITE	BITF	BITF
	SCREENING CRITERIA																			
	Oregon SLVs - Surface Water										oncentration		1						X	
Sample Identification:						Fish				Construction	Volatilization	Site-	LW29\$	LW29S	LW29S	LW29S	LW29S	LW30S	Dup of LW30S	LW30S
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific	FZ04C 10/27/2003	0402080-08 2/17/2004	0406050-06 6/8/2004	0408006-06 8/2/2004	0411047-02	FZ04E 10/27/2003	FZ04L	0402085-01
Date Collected:	Aquauc	birds	Marnmais	Acute	Unranic	Uniy	CIVIC (Acute)	CCC (Chronic)	Uniy	VVOIKEI	Occupational	Background	10/27/2003	2/1//2004	6/8/2004	8/2/2004	11/8/2004	10/27/2003	10/27/2003	2/18/2004
NWTPH-Dx																				
TPH-Diesel Range	enteres de la constante de la					mater due to a contract of		TO SHIP STORES AND AND AND AND AND AND AND AND AND AND					0.25 U	0.243 U	0.255 U	0.337	0.36	0.87	0.86	2.06
TPH-Motor Oil Range								2 3 4 5					0.5 U	0.485.U	0,511 U	0.481 U	0.503 U	05 U	0.5 U	0.486 U
NWTPH-G										i										
TPH-Gasoline Range			-					-		12			0.25 ∪	0.100 U	0.100 U	0.100 U	0.100 U	0.84	0.89	0.904
								1												
PRIORITY POLLUTANT									•											
METALS (mg/L) Arsenic (7060)	0.45 (1) (2)	40.00		0.04	5.45	0.00044 1.1/4					i			2 2224						
	0.15 (j) (*) <b>0.011 (k)</b>	18 (j)	25 (k)	0.34	0.15 0.065 (I)	0.00014 (g)(*)	0.34 (*) 0.57	0.15 (*) 0.074	0.00014 (*)	705 (805 (805 (805))		1.5	0.002 0.005 U	0.00219 0.005 U	0.00146	0.00269 U 6.0171	0.00329	0.013 0.005 U	0.013 0.005 U	0.0175 0.008
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (l)	0400	0.013	0.009	400000000000000000000000000000000000000			0.004	0.002 U	0.01 U	0.01761 0.01 U	0.01 U	0.0169 0.01 U	0.002 U	0.002 U	0.01 U
	0.0025 (*)	28	323		0.0007 (1)(*)		0,085	0.0025 (*)				0.02	0.001 U	0 0001 U	0.0001 U	0.0001 U		0.001 U	0.001 U	0.00151
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (I)	4.6	0.47	0.052	4.6	-		0.01	0.01 U	0.005 U	0.005 ∪	0.005 U	0.005 U	0.01 U	0.01 U	0.005 U
Zino (6010):	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26			0.015	0.007	.0.01 U	0.01 U	0.01 U	0.01 U	0.006 U	0.007	0.01 U
													Ì							
BETX (μg/L)								1												
EPA Method SW8021B Benzene	400		000000	E000 (-)		54.63				4700									***	
1974 - 1974	7.3	-	200000 200000 (fi	5300 (a) 32000 (a)		51 (g) 2100			51 29,000	1700 110,000	13000		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	9.8		104000	17500 (a)		15,000	7 - 2 - 2 - 2 - 2	SEC. 18. S. 18. T. A.	200.000	78,000			NA NA	NA NA	NA NA	NA NA	Parity Branch	NA	NA NA	NA
			8000 (h)			10,000			200,000	22.000			NA.	NA.	NA -	NA	SE SE NA SE	NA NA	NA.	
			Committee of the Commit	- The second sec	CEEST - CEC - Commun.											Principle Indian Control of the Control	Ph- (885-4870-4-190-1	SIS-ALISSA ACINO METANO PER CONTRACTOR	220-1107-1107-1207-1207-1207-1207-1207-1	
DIOXIN/FURANS (ng/L)																				
EPA Method SW8290						i														
Total TEQ			1			5.1E-06	- 1				[		NA	NA	NA	NA	NA	NA	NA	NA

Page 22 of 50

TABLE D-1
Page 23 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BTTE	BTTF	BITF	BTTF	BTTF	BTTF	ВПТЕ	BITTE
							SCREENING CRI	TERIA												
Sample Identification	Oregon	SLVs - Surfa	ice Water	Oregon A	nbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based Construction	Concentration		1							
Sample identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	and Excavation	Volatilization to Outdoor Air	Site- Specific	LW30S 0406050-08	LW30S 0408020-04	LW30S 0411047-04	LW31S FZ04G	LW31S 0402080-03	LW31S 0406050-02	LW31S 0408006-02	LW31S 0411052-02
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Warker	Occupational	Background	6/8/2004	8/3/2004	11/8/2004	10/27/2003	2/17/2004	6/8/2004	8/2/2004	11/9/2004
SEMIVOLATILES (µg/L)																				
EPA Method SW8270 2,4-Dimethylphenol	42			2120 (a)		850			850	1			2.96 U	2.91 L			J 2.9 U	2.86 U		
2-Methylnaphthalene	620 (b)		2840007b)			1 0 10	berite.		850		# 15-E		0.985 U	2.91 0.969 1		3 U		0.952 U		
Acenaphthene	520			1700 (a)	520 (a)	990	-	-	990		***		1.02	0.969 L	0.978 U	1 U	0.966 U	0.952 U	0.952	U 0.985 U
bis(2-Ethythexyl)phthalate Carbazole	3.0	8000	73000			2.2			2.2		Dr. Oktober 1981		0.985 U 0.985 U	0.969 t 0.969 t		2,4 1 U		0.952 U 0.952 U		
Dibenzoforan	3.7												0.985 U							
Di-n-Butylphthalate	35	800	2,200,000	NAME OF TAXABLE		4500			4500				0.985 U	0.969 L		1 U		0.952 U	0.952	J 0.985 U
Pluorene Naphthalene	3.9 620		284,000	2300 (a)	620 (a)	5300			5300	680			2.02 0.985 U	1.05 U 0.969 U		1 U		0.952 U 0.952 U		
Pentachlorophenol	15		1800	19 (c)	= 15 (c)	3.0	19	15	80		<u> </u>		4.93 U	4.84 L		6.1 U		4.76 U		
Phenanthrene Phenol	6.3		284000 (b)				-	Land books 1 state 6				*** AND	1.86	1.28	0.976 ∪	1 U		0.952 U	0.952 (	
FIGURE	110			10200 (8)	2560 (a)	1,700,000							1.97 U.	1 94 U	1.96 U	2U	1,93 ∪	1,920	191	J. 97 U
EPA Method SW8270SIM			4000		45.00		40	l		1							*10			
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0			***	NA.	NA	NA	NA	NA	NA	NA	NA
PAHs (µg/L)							1	1					1							
EPA Method SW8270 - SIM 2-Methylnaphthalene	620		284,000		_								NA.	NA	NA	0.1 U	NA	NA.	NA	NA
Acenaphthene	520			1700 (a)	520 (a)	990			990				0.83	0.64	0.404	01.0		0.05 U		
Acenaphthylene	620 (b)		284,000									90.00.00	0.19	0.32	0.0866	0.1 U		0.05 U	0.05 L	
Anthracene Benzo(a)anthracene	0.027					40,000 0.018	1 / ·		40,000 0.018	9.1		4 6.00	0.08 0.05 U	0.09 0.05 U	0.0481 NA	01 U 0.1 U		0.06.U 0.05 U	0.05 L 0.05 L	
Benzo(a)pyrene	0.014					0.018			0.018	0.53			0.05 U	0.05 U	0.0481 U	0.1 U	0.0486 UJ	0.05 U	0.05 (	
Benzo(b)fluoranthene Benzo(g;n,i)perylene	6.16 (d)					0.018			0.018				0.05 U 0.05 U	0.05 U 0.05 U		0.1 U 0.1 U		0.05 U	0.05 L	
Benzo(k)fluoranthene						0.018	-		0.018		·		0.05 U	0.05 U		0.1 U	0.0486 UJ	0.05 U 0.05 U	0.05 t 0.05 t	
Chrysene w			-1,8			0.018	140.5		0.018				0.05 U	0.05 U		0.1.0		0.05 U	0.05 L	0:0521 U
Dibenzofuran Fluoranthene	3.7 6.16			3980 (a)		140			140		 		NA 0.05 U	NA 0.05 U	NA 0.0481 U	0.1 U 0.1 U		NA 0.05-U	NA 0:05-L	NA J 0.0521 U
Fluorene	3.9		1-	mesons term	-	5300	-		5300				1.54	1.15	0.799	0.1 U	0.0486 UJ	0.05 ∪	0.05 L	
Indeno(1,2,3-cd)pyrene						0.018			0.018				0.05 U	0:05, U	0.0481 U	0.10		0.05 (1.		
Naphthalene Phenanthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)					680			0.51 1.35	0.55 0.99	0.308 0.78	0.1 U 0.1 U	0.0486 UJ 0.0486 UJ	0.05 U 0.05 U	0.05 L	
Pyrene		**				4000			4000	-	Tibbo of		0.05 U	0.05 U	0.0491 U	0.1 U	0.0486 UJ	0.05 U	0.05 L	
VOLATILES (µg/L)																				
EPA Method SW8250																				
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)				140.5			1300 1400			1 U	1 U 1 U		1 U	1 UJ 1 UJ	1 U	1 U	
4-isopropyltoluene	9.8 (f)	-	104000 (f)			-						26.10.00	1 U	1 U		1 U	1 UJ	1 U	1 0	
Benzene	130		200,000			51 (g)		a de <del>la</del>	51		23,000		0.3 U			1 Ú			0.3 U	
Ethylbenzene Isoprobylbenzene	7.3 190		200000 (e)	32000 (a)		2100			29,000	110,000			1 U 8,76	1 U 7.68 J	1 U 4.67	1 U	1 UJ 1 UJ	1 U	1 0	
m.p-Xylene	13 (h)		8000 (h)			-		-	-	22000 (i)			2 U	2 U	2 U	1 U	2 UJ	2 U	2 U	2 U
Methyl ten Butyl Ether n-Butylbenzens	120 (a)	30.40	200000 (e)							31,000	550,000		1°U 3.98	1 U 3.46 J	1 U	1.0		7.0		
n-Butylbenzene n-Propylbenzene	130 (e) 130 (e)		200000 (e)										3.98 36.4		3.55 28	1 U	1 UJ 1 ÜJ %	1 U	1 U	
Naphthalene	620	_ accuracy and a	284,000	2300 (a)	620 (a)	-	-			680			1 U	1 U	1 U	5 U	1 UJ	1 U	1 U	1 U
o-Xylene sec-Butylbenzene	1.8 130 (e)		200000 (e)							29000 (r)		28 SE	1 U 2.3	1 U 2.48 J	1.17	1 U 1 U	1 UJ 1 UJ	1 U 1 U	1 U	
tert-Butylbenzene	130 (e)		200000 (e)										2.0 1.0			1.0		10	1 U	
Toluene	9.8		104,000	17500 (a)		15,000	-	**	200,000	78,000			1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	
HYDROCARBONS (mg/L)			- 1																	
NWTPH-HCID			- 1																	
Gasoline Diesel										12			NA NA	NA NA	NA NA	NA NA	NA NA	NA KIA	NA NA	NA NA
(A) GOOD				THE REAL PROPERTY.					-	was his ter had a			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	INA.	THE IND	NA-	NA STATE	NA	NA.	NA

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TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BTTF	BITF	BTTF	BTIF	BITF	BTTF	BTTF	BITF
							SCREENING CRE	CDIA.					_							
	Oregon	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based	Concentration	T	+							
Sample Identification:						Fish			,	Construction	Volatilization	Site-	LW30S	LW30S	LW30S	LW31S	LW31S	LW31S	LW31S	LW31S
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0406050-08	0408020-04	0411047-04	FZ04G	0402080-03	0406050-02	0408006-02	0411052-02
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/8/2004	8/3/2004	11/8/2004	10/27/2003	2/17/2004	6/8/2004	8/2/2004	11/9/2004
NWTPH-Dx																				
TPH-Diesel Range						**							2.23	1.44	0.747	0.59	0.242 U	0.469	0.576	0.568
TPH-Motor Oil Range													0.497 U	0.493 L	J 0 491 U	0.5 U	0.483 U	0.492 U	0.475 U	0.593
NWTPH-G	Į.									i										
TPH-Gasoline Range									i	12			1.0	0.719	0.637	0.25 U	0.100 U	0.100 U	0.100 U	0.100 U
Ti Ti dato into Tiango	İ			i			i	]						010	0.007	0.20 0	0.100 0	0.100 0	0.100 0	0.100 0
PRIORITY POLLUTANT								Ì												
METALS (mg/L)				1								]								
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0154	0.0163	0.0141	0.001 U	0.001 U	0.001 U	0.00148_U	0.00136
Chromium (6010)	0.011 (k)		25 (k)	. 0.29 (f)	0.065 (1)	3433	0.67	0.074				0.005	0.005 ∪	0.0147	0.0229	0.005 U	0.005 U	0.0187	0.0138	0.0182
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)	-	0.013	0.009				0.004	0.01 U	0.01 L		0.002 U	0.01 U	0.01 U	0.01 U	0.01 U
Lead (7421)	0.0025 (*)	- 28 ∵	323	0.043 (I)	0,0007 (f)(*)	<u> </u>	0.065	0.0025 (*)				0.02	. 0.00121	0.00079	0.00076	0.001 U		0.0001 U	0.0001.U	
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (1)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.005 L		0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26			0.015	0.01 U	0.G1 L	0.01 U	0.008	0.01 U	0.01 U	0.01 U	001 U
DETY ( -4)													ł							
BETX (µg/L) EPA Method SW8021B									ŀ				1							
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3	Marie Marie Val	20000040	32000 (a)		2100			29,000	110,000	13000		NA AIA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene	9.8		104000	17500 (a)		15,000			200.000	78,000			NA.	NA.	NA.	NA NA	NA	NA NA	NA	NA NA
Xylenes, Total	13 (h)	ELIZE IN	8000 (b)	17500 (0)					200,000	22,000			No.	NA NA	NA NA	NA I	NA NA	NA NA		NA I
	MANAGER AND REAL PROPERTY.		- w-on - o - o - o - o - o - o - o - o - o	W. Helency (States)	CELY SIZE CHINACL STREET,	Marie Carlotte Commission Commiss		The common and the same of the same of the Sandal	10 Not 2 Notes (10 Not 20 Not	and the second										
DIOXIN/FURANS (ng/L)													i							
EPA Method SW8290																				
Total TEQ		**			**	5.1E-06							NA NA	NA	NA	NA	NA	NA	NA	NA

Page 24 of 50

Page 25 of 50

### BZTO104(e)023527

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BITTE	*** BTTF	BITE	BITE	BTTF	BTTF	BTTF	BTTF
							SCREENING CRI	TERIA					ļ							
	Oregon	SLVs - Surfa	ice Water	Oregon An	nbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration		1							
Sample Identification: Laboratory Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW32S FZ04H	LW32S 0402080-05	LW32S 0406050-04	LW32S 0408006-04	LW32S 0411052-03	LW33S 0402080-04	LW33S 0406050-03	LW33S 0408006-03
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/27/2003	2/17/2004	6/8/2004	8/2/2004	11/9/2004	2/17/2004	6/8/2004	8/2/2004
SEMIVOLATILES (µg/L)																				
EPA Method SW8270										1										
2.4-Dimethylphenol 2-Methylpaphthalene	42 620 (b)		284000 (b)	2120 (a)		850			850	 			3.1 U		2.98 U 0.993 U	2.91 U 0.97 U		2.9 U 0.968 U	2.91 U 0.971 U	
Acenaphthene	520		2040VO (b)	1700 (a)	520 (a)	990		-	990	-			1 U		0.993 U	0.97		0.968 U	0.971 U	
pis(2-Ethylhexyl)pfithalate	3.0	6000	73000			2.2			22				2.1	0.98 U	0.998 Li	0.97-1	J 0.091 U	0.988 U		1.99
Carbazole	3.7			-									1 0		0.993 U	0.97 (		0.968 U	0.971 U	0.964 U
Dibenzofuran Di-n-Butylphthalate	35	800	2,200,000			4500			4500			***	1 U		0,993 U 0,993 U	0.97 U 0.97 U		0.968 U 0.968 U	0.971 U 0.971 U	0.964 U 0.964 U
Fluorene	3.9					5300			5300				- T- T- T- U		0.993 U			0.968 U	0.971 U	
Naphthalene	620		284,000	2300 (a)	620 (a)		-			680			1 U		0.993 U	0.97 L		0.968 U	0.971 U	0.964 U
Pentachlorophenol Phenanthrene	6.3		1800 284000 (b)	19 (c)	15 (c)	3.0	19	16	3.0			***	52 U		4.97 U 0.993 U	4.85 t 0.97 t		4.84 U 0.968 U	4.85 U 0.971 U	4.82 U 0.964 U
Phenol	AND DESCRIPTIONS		204000 (0)	10200 (a)	2560 (a)	1,700,000						40.344	2.1 U		1.99 U					
																			ALL SECTION OF THE PARTY OF THE	
EPA Method SW8270SIM Pentachiorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	1			NA	NA	NA	NA	NA	NA	NA	NA
•	'*		1000	10 (0)	10 (0)	0.0		"	0.0					100		100	146	146	144	
PAHs (µg/L) EPA Method SW8270 - SIM																				
2-Methylnaphthalene	620		284.000		_								0.1 U	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	520			1700 (a)	520 (a)	990			990			医骨梯皮膜	0.52	0.38 J	0,3	. 0.05 U	0.47	0:0483 UJ	0.05 ti	0.05 U
Acenaphthylene	620 (b)		284,000	SHOULD SHOULD									0.1 U		0.08	0.4	0.108	0.0483 UJ		0.05 U
Anthracene Benzo(a)anthracene	0.027			The second		40,000 0.018			40,000 0.018	9.1	a made an		0.1 U 0.1 U		0.05 0.05 U	0.1 0.05 U	C.0489 U NA	0.0483 U.J 0.0483 U.J	0.05 U 0.05 U	0.05 0.05 U
Benzo(a)pyrene	0.014					0.018			0.018	0.63			010		0.05 U	0.05 (		0.0483 UJ		0.05 U
Benzo(b)fluoranthene	6.16 (d)					0.018			0.018				0.1 U		0.05 U	0.05 L		0.0483 UJ	0.05 U	0.05 U
Benzo(g.b.i)perylene Benzo(k)fluoranthene						0.018			0.018				0.1 U 0.1 U		0.05 U 0.05 U	0.05 L 0.05 L		0.0483 UJ 0.0483 UJ		
Chrysene			_			0.018			0.018				0.1 U		0.05 U	0.05 (		0.0488 UJ		0.05 U 0.06 U
Dibenzofuran	3.7						<del>.</del>						0.38	NA .	NA	NA	NA	NA	NA	NA
Figoranthene	6,16			3980 (a)		140			140			***	0.1 U	0.0488-UJ	0.05 U	0.06	0.0489 U	0.0483 UJ		0.05 U
Fluorena Indeno(1,2,3-cd)pyrene	3.9	_				5300		_	5300				0.67 0.1 U	0.488 J 0.0468 UJ	0.36 0.05 U	0.1 	0.705 0.0489 U	0.0483 UJ 0.0483 UJ		0.05 U
Naphthalene	620		284,000	2300 (a)	620 (a)					680			0.1 U		0.63	1.78	0.9	0.0483 UJ		0.05 U
Phenanthrene	620 (b)		284000 (b)								-		0.31			0.17	0.186	0.0483 UJ		0.05 U
Pyrene		**				4000		**	4000	-			0.1 U	0.0488 UJ	0.05 U	0.05 U	0.0489 U	0.0483 UJ	0.05 U	0.05 U
VOLATILES (µg/L)																				
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)		200000 (e)						1	1300			1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	4.0
1,3.5-Trimethylbenzene	130(e) 130 (e)		200000 (e)							1400			1 U		1-0	1.0				1 U
4-Isopropyltoluene	9.8 (f)		104000 (f)				-		-				1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	130		200,000	5300 (a)					51	1700	13.000		1.0 1.0		030				030	
Ethylbenzene Isopropylbenzene	7.3 130		200000 (e) 200000 (e)	32000 (a)		2100			29,000	110,000			1 U		1 U 7.05	1 U 19.4 u		1 U	1 U	1 U
m,p-Xylene	13 (h)		8000 (h)		er uderkommister 1982 vil				-	22000 (i)			1 U	2 UJ	2 U	2 U	2 U	2 ∪	2 U	2 U
Methylten-Butyl Ether			70-8							31,000	550,000		u.u		10			Utura	r u	
n-Butylbenzene n-Propylbenzene	130 (e) 130 (e)		200000 (e) 200000 (e)		E.E.E.E.E.								6.1 20	2.24 J 4.87 J	2.69 9.16	8.47 J 20.5 J	10.7 50.6	1 U	1 U	1 U
Naphthalene	620	-	284,000	2300 (a)	620 (a)	oran dat and like	D-MACON HIGH - 1919 TEMPHONE	-	**	680	CONTRACTOR SECTION	Berry Carlotte Street	5 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U
d-Xylene	-8.1		8000 (h)		7 04 T					22000 (I)		A CONTRACTOR OF THE PARTY OF TH	T TU	1.03		1.0				1.0
sec-Butylbenzene tert-Butylbenzene	130 (e) 130 (e)		200000 (e)	-									6.5	2.52 J 1 UJ	3.73 1:U	8.65 J	12 1.58	1 U	1 U	1 U
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000			1 U	1 UJ	1 U	1 U	1.58 1 U	1 U	1 U	1 U
HYDROCARBONS (mg/L)				>													. •	. •		
NWTPH-HCID			i			l														
Gasoline			46 88 15 18 18 18 18 18 18 18 18 18 18 18 18 18	TENTINENES (MAIN	rigging the second					12			NA	NA	NA	NA	NA NA	NA	NA	NA NA
Diesel	Y												NA	NA NA	NA sin	, NA	NA NA	NA	NA .	E ■ NA

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Page 26 of 50

													BTTF	BTIF	BTTF	BTTF	BTTF	BTTF	BTTF	BTTF
r							SCREENING CRE	FEDIA												
-	Oregon	SLVs - Surfi	ce Water	Crecon Ar	nhient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based	Concentration	I	1							
Sample Identification:	- Oregon (	ocro oum		- Olegon zu	no.com mana	Fish	Transmit Tra	1		Construction	Volatilization	Site-	LW32S	LW32S	LW32S	LW32S	LW32S	LW33\$	LW33S	LW33S
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism		to Outdoor Air	Specific	FZ04H	0402080-05	0406050-04	0408006-04	0411052-03	0402080-04	0406050-03	0408006-03
Date Collected:	Aquatic	Birds	Mammais	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/27/2003	2/17/2004	6/8/2004	8/2/2004	11/9/2004	2/17/2004	6/8/2004	8/2/2004
NWTPH-Dx																				
TPH-Diesel Range			_										3.3	1.84	3.48	4.24	4.44	0.247 U	0.244 U	0.241 U
TPH-Motor Oil Range			44.5			- 46		- F 16 F					0.5 U	0.488 U	0.5 U	0.488	U 0.721	0.494 U	0,487 U	0.482 U
NWTPH-G																				
							-		_	12			1.8	1.1	1.17	1.33	2.87	0.100 U	0.100 U	0.100 U
TPH-Gasoline Range	-					-	**	-		12			1.0	1.1	1.17	1.33	2.07	0.100 0	0.100 0	0.100 0
PRIORITY POLLUTANT																				
METALS (mg/L)																				
Arsenic (7060)	0.15 (j) (*)	18 (i)	6	0.34	0.15	0.00014 (a)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.034	0.0233	0.0255	0.0314	0.0303	0.001 U	0.001 U	0.001 U
Chromium (6010)	0.011 (k)		25 (k) =	0 29 (1)	0.065 (i)	3433	0.57	0.074				0.005	0.005 U		0.0162	0.0125	0.0175	0.0113	0.005 U	
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009				0.004	0.002 U	0.01 U	0.01 U	0.01	J 0.01 U	0.01 U	0.01 U	0.01 U
Lead (7421)	0.0025 (*)	28	923	0.043 (1)	0.0007 ()(*)		0.065	0.0025 (*)			9	0.02	0.001 U	0.0001 U	0.0001 U	0.0001 l	J 0.0001 U	0.0001 U	0.0001 U	0.0001-0
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.01 U	0.005 U	0.005 U	0.005 1		0.005 U	0.005 U	0.005 U
Zinc (6010)	0.120	105	1230	0.1.(1)	0.1 (1)	26	0.12(0.72	0.12	26			0.016	0.008	0.01 U	0.01.0	0.011	J 0.01 U	0:0111	0.01 U	0.01 U
													l							
BETX (μg/L)																				
EPA Method SW8021B																				
Benzene	130		200000	5300 (a)		51 (g)			51	1700 110,000	13000		NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA
Ethylbenzene	-07/801		200000 (f)	Charles and the second	******	2100			29,000			TO SERVICE AND ADDRESS OF THE PARTY OF THE P	- The second second	NA NA		NA NA		Company of the Compan		NA.
Toluene	9.8 13 (h)	-	104000 8000 (h)	17500 (a)		15,000			200,000	78,000 22,000			NA NA	NA NA	NA NA		NA Ha	NA NA	NA NA	NA NA
Xylenes, Total	13 (0)		outo ini	中央展刊的企業上的					30.364	COMVI			13/4		in Marc		19/5	JNG.	NA.	- The state of the
DIOXIN/FURANS (ng/L)				1									l							
EPA Method SW8290				1					1											
Total TEQ			_			5.1E-06		_					NA.	NA	NA	NA	NA	NA	NA	NA
				•				'	'	•	'		, ,							

TABLE D-1 Page 27 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													BTIF	втт	BTTF	ВПЕ	BTTF	BTTE	ВТТЕ	втт	E-CR
							SCREENING CR									_					<del>                                     </del>
0 111 115 11	Oregon	SLVs - Surfa	ace Water	Oregon A	nbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration		114/								
Sample Identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW34S FZ04J	LW34\$ 0402080-01	LW34S 0406050-01	LW34S 0408006-01	LW34S 0411047-01	LW42S 0411047-06	LW43S 0411052-01	LW44S 0411047-07	GW4-1 0108238-01
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational		10/27/2003	2/17/2004	6/8/2004	8/2/2004	11/8/2004	11/8/2004	11/9/2004	11/8/2004	8/31/2001
SEMIVOLATILES (µg/L)																					
EPA Method SW8270										-											ĺ
2,4-Dimethylphenol	42	antiture diagrams		2120 (a)		850			850				3.1 L			2.95 U					3.00 U
2-Methylnaphthalene Acenaphthene	620 (b) 520	16.5	284000 (b)	1700 (a)	520 (a)	990			990			22 ) let-	1	0.965 U 0.965 U	0.985 U 0.985 U	0.983 U 0.983 U			1.52	0.986 U 0.986 U	1.00 U
bis(2-Ethylhexyl)phthalate	3.0	8000	A STATE OF THE REAL PROPERTY.	1700 (a)	32.0 (a)	2.2			2.2				4.9	0.965 U		0.983 U		CALLECT THE CONTRACT OF THE CONTRACT			6.00 U
Carbazole		-											1 L		0.985 U	0.983 U					1.00 U
Dipenzofuran	3.7					10.*						All bases	1.6			0 983 U		J 1.03 L			1.00 U
Di-n-Butylphthalate	35	800	2,200,000	- in		4500 5300			4500 5300				1 L		0.985 U 0.985 U	0.983 U 0.983 U		CONTRACTOR OF THE PARTY OF THE	1 1 U 3:24	0.986 U 0.986 U	1.00 U 1.00 U
Fluorene Naphthalene	620		284,000	2300 (a)	620 (a)				- 2300	680			1 L		0.985 U	0.983 U					1.00 U
Pentachlorophenol	15		1800	19 (6)		3.0	19	15	3.0				5.1 0	4.83 U		4.92 U					5.00 ∪
Phenanthrene	6.3	-	284000 (b)			A-	- Committee of the Comm	-			AND DESCRIPTION OF THE PARTY OF		1 U		0.985 U	0.983 U			3.78	0.986 U	1.00 U
Phenol	110			10200 (a)	2560 (a)	1,700,000	1000	**********					= 2 U	1.98 U	1,97_U	1.97 U		J 2 05 L	2.01 U	1.97 U	1.00 U
EPA Method SW8270SIM				l						1											
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	NA	NA	NA	NA	NA	NA	NA	0.500 U
PAHs (µg/L)										ŀ											
EPA Method SW8270 - SIM																					
2-Methylnaphthalene	620		284,000		and the second						Ni ni ni		0.1 U		NA NA	NA	NA	NA.	NA NA	NA	NA NA
Aconaphthene	520			-1700 (a)	520 (a)	990			990	1	i ga ze		0.5.0			0.05 U	0.0498 L		1,32	0.129	0.0500
Acenaphthylens Airthracene	620 (b) 13		284,000			40,000			40,000		MI L		0.1 U	0.049 UJ 0.049 UJ	0.05 U 0.05 U	0.05 U 0.05 U			0.306 0.126	0 0498 U 0 0498 U	0.0500 U =0.0500 U
Benzo(a)anthracene	0.027					0.018			0.018	9.1		and the second second	0.1 ∪	0.049 UJ		0.05 U		NA	NA NA	NA	0.0500 U
Benzo(a)pyrene	0.014					0.018			0.018	0.53			0.1 U			0.05 U			0.0527 U	0.0498 U	0.0500 U
Benzo(b)fluoranthene	6.16 (d)	ERESENTANT			-	0.018	AN ASSESSMENT		0.018	-			0.1 U	0.049 UJ		0.05 U		0.0489 U	0.0527 U	0.0498 U	0.0500 U
Benzo(g.h.))perylene Benzo(k)fluoranthene					S	0.018		B 5/2-	0.018	A COMMITTEE		- XII	0.1 U 0.1 U	0.049 UJ 0.049 UJ		0.05 U 0.05 U	0.0498 L 0.0498 L	0.0489 U 0.0489 U	0.0527 U 0.0527 U	0,0498 U 0.0498 U	0.0500 U 0.0500 U
Chrysene						0.018			0.018				010						0.0527 U	0.0498 U	0.0500 U
Dibenzoluran	3.7				and contract to the Contract	-							0.1 U	NA	NA	NA	NA.	NA	NA	NA	NA NA
Fluoranthene	6.16			3980 (a)		7.40 5300			140 5300				010	0.049 UJ 0.049 UJ		0.05 U			= 0.0527 U	0.0498 U	0.0500 U
Fluorene Indeno(1;2,3-cd)pyrene	3.9		-			0.018			0.018				0.1 U 0.1 U	0.049 03		0.05 U 0.05 U	0.0498 U		3.16 0.0527 U	0.179 0.0498 U	0.0500 U 0.0500 U
Naphthalene	620		284,000	2300 (a)	620 (a)		-			680		***	0.1 U	0.049 UJ		0.05 U			0.453	0.706	0.0500 U
Phenarithrene	620 (b)		284000 (b)				. 14.6						0.1 U			0.05 U			2.9	0.0498 U	0,0500 U
Pyrene					***	4000	-		4000	-			0.1 U	0.049 UJ	0.05 U	0.05 U	0.0498 U	0.0489	0.0527 U	0.0498 U	0.120
VOLATILES (μg/L)								ļ			1										
EPA Method SW8260																					
1,2,4-Trimethylbenzene	130(e)		200000 (e) 200000 (e)							1300			1 U	1 U	1 U	1 U	1 U		1 U	1 U	0.200 U
1,3,5 Trimethylbenzene . 4-isopropylitoluene	130 (e) 9.8 (f)		104000 (e)	-		-		-		1400			1 U	1 U	1 U	1 U	1 U			1 U	0.200 U 0.200 U
Eerzene	130	1/4	200,000	5300 (a)		51 (g)	- 0	\$	51	1700	13,000		10	THE RESERVE AND ADDRESS OF THE PARTY OF THE	0.3 U	0.3 U			0.68	030	_0.200 U
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100	-		29,000	110,000			1 U	1 U	1 U	1 U	1 U		1 U	1 U	0.200 U
Isopropylbenzene m.p-Xylene	130 13 (h)	Y	200000 (e) 8000 (h)							22000 (i)			1 U	2 U	1 U 2 U	1 U 2 U	1 U 2 U		6.94 2 U	<b>78.9</b> 2 U	0.200 U
m,p-xylene Methyl terr-Butyl Ether	13 (N)		0000 (II)					0.4		22000 (I) 31,000	550.000		10		2 U		2 U			2 U	0.400 U NA
n-Butylbenzene	130 (e)		200000 (e)	**	THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF T		-		-				1 U	1 U	1 U	1 U	1 U		6.08	2.33	0.200 U
n-PropylBenzene	130-(e)		200000 (e)								4.6		1-U		1 U	1.0			27,7	61.4	0.200 U
Naphthalene e-Xylene	620 1.8		284,000 8000 (h)	2300 (a)	620 (a)					680 22000 (i)			5 U	1 U	1 U	1 U	1 U		1 U	1 U	0.500 U 0.200 U
sec-Butylbenzene	130 (e)	-	200000 (e)		-	THE RESERVE THE PERSON NAMED IN	**************************************				N HOLLEN		1 U	1 U	1 U	1 U	1 U		2.42	1 U 11.9	0.200 U
tert-Butylbenzene	130 (e)		200000 (e)					SA A-	100				a at a u	10		1 U	10			1.72	0.200 U
Toluene	9.8		104,000	17500 (a)		16,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.200 U
HYDROCARBONS (mg/L)																					
NWTPH-HCID																				Į	
Gasoline	and the second second									12			NA	NA	NA NA	NA	NA	NA.	NA.	NA.	0.25 U
Diesel				3.4								45 39	- NA	NA NA	. NA	NA	NA.	NA	NA =	NA.	- 0.63 U

7/19/05 \\Edmdata\wproc\231\009\132\PhiII RI 071905\PhiII RI Rpt\_App D Upper GW 1

Page 28 of 50

													BTIF	BTTF	BTTF	BTTF	BITE	BITTE	BTTF	BITF	LR
ı							SCREENING CRIT	ERIA				-									_
l	Oregon S	SLVs - Surfa	ce Water	Oregon An	nbient Water	Quality Criteria	National Reco	mmended Water	Quality Criteria	Risk-Based (	Concentration		1								
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	LW34S FZ04J 10/27/2003	LW34S 0402080-01 2/17/2004	LW34S 0406050-01 6/8/2004	LW34S 0408006-01 8/2/2004	LW34S 0411047-01 11/8/2004	LW42S 0411047-06 11/8/2004	LW43S 0411052-01 11/9/2004	LW44S 0411047-07 11/8/2004	GW4-1 0108238-01 8/31/2001
NWTPH-Dx				THE STATE OF THE S		,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,													
TPH-Diesel Range	_												0.25 U	0.242 U	0.242 U	0.242 U	0.251 U	2.23	1.91	3.77	NA.
TPI - Motor Oil Range										\$50, 000 C		***	0.5 U		0.484 U					0.602 U	
NWTPH-G																					
TPH-Gasoline Range							_	_		12			0,25 U	0.100 U	0.100 U	0.100 U	0,100 U	1.72	0.988	2.94	NA.
Ti Ti Guadinia Founga				-									0.20 0	0.100 0	0.100 0	0.100 0	0.100 0		0.000	2.04	147
PRIORITY POLLUTANT																					
METALS (mg/L)										l			ĺ								
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.001	0.001 U	0.001 U	0.001 U			0.0109	0.0123	0.0251
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)	0.065 (1)	8435	0.57	0.074			security street and a second	0.005	0 005 U		0.005 U			0.0215	0.0176	0.0176	0.00500 U
Copper (6010) Lead (7421)	0.009	341 - 28	53 223	0.05 (I) 0.043 (I)	0.011 (i) 0.0007 (f)(*1		0.013	0.009		LINE TO SERVICE THE		0.004 0.02	0.002 U 0.001 U	0.01 U	0.01 U 0:00015	0.01 U 0.0001 U	0.01 U 0.00015 U		0.01 U 0.00068	0.01 U 0.00717	0.0100 U -0.00200 U
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.01 U	0,005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.00500 U
Zinc (6010)	0.120	105	1230	0.770	0.1 (1)	26	0.12	0.12	26			0.015	0.009	0.01 U	0.01 U	0.0133	0.01 U				0.0100 U
7		9474E-1-00E-1-00E-1	COMMUNICATION OF STREET																		,
BETX (µg/L)																					
EPA Method SW8021B																					
Benzene Ethylbenzene	130	Cassing Committee	200000 (f)	5300 (a)		51 (g) 2100			51 28,000	1700 10,000	13000		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Toluene	7.3. 9.8		104000	32000 (a) 17500 (a)		15,000	10.10		200.000	78,000		***	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA
Xyenes, Total	13 (h)		8000 (h)			10,000		419/361 45-45v	200,000	22,000			NA NA	NA NA		NA NA	NA.	NA.	NA.	NA NA	NA NA
	The state of the state of	The state of the s	S. O. SHAN SIXTURAL	emman residentation sale		2.10. 11. 11. 11.		2002 - Tree to \$ 150 - 500 -		COLUMN TO PROPERTY OF THE	The second second second	market and the second second								- NACE - COLUMN PORT	100
DIOXIN/FURANS (ng/L)						1															
EPA Method SW8290																					
Total TEQ	-	-				5.1E-06	]			ı			NA NA	NA	NA	NA	NA	NA.	NA	NA	NA

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													LE	E LA	LR	LA.	LR	EP	EP	EP
							SCREENING CRI					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
Sample identification	Oregon	SLVs - Surfa	ice Water	Oregon An	nbient Water	Quality Criteria Fish	National Rec	ommended Water	Quality Criteria	Risk-Based Construction	Concentration Volatilization	Site-	LW7S	LW7S	LW7S	LW7S	LW7S	GW6-1	GW15-1	GW17-1
Laboratory Identification				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	FY64F	0402099-03	0406059-05	0408019-01	0411051-10	0108238-02	0108238-04	0108238-03
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/20/2003	2/19/2004	6/9/2004	8/3/2004	11/9/2004	8/31/2001	8/31/2001	8/31/2001
SEMIVOLATILES (µg/L) EPA Method SW8270									l c											
2,4-Dimethylphenol	42			2120 (a)		850		_	850				3 U	2.92 ∪	3.02 ∪	2.99 (	J 3.01 U	3.00 ∪	3.00 U	3.00 U
2-Methylnaphthalene	620 (b)	•	284000 (b)	•						20 20 20 E		40.000	1.9	0.975 U						1.00 U
Acenaphthene bis(2-Ethythexyl)phthalate	520 3.0	8000	73000	1700 (a)	520 (a)	990 <b>2.2</b>			990				1 U		1.01 U 1.01 U	0.996 t 0.996 t		1.00 U	1.00 U 1.00 U	1.00 U 1.00-U r
Carbazole				-		-	20-42-00-28-00-	there's a contract of the contract of	and the second second				1 U	0.975 U	1.01 U	0.996 (	J 1 U	1.00 U	1.00 U	1.00 U
Dibenzofuran 💮 🖟	3.7				W (1)		CPSESSES.	- V					1.0			0.996				
Di-n-Butylphthalate Fluorene	35 3.9	800	2,200,000			4500 5300			4500 5300				1 U		1.01 U	0.996 L			1.00 U	1.00 U 1.00 U
Naphthalene	620		284,000	2300 (a)	620 (a)					680			4.4	0.975 U	5.13	4.43	1 U			1.00 U
Pentachlorophenot			1800	19 (c)	15 (c)	3.0	19	15	3.0			59	6 U		5 04 U	4 98 1		5 00 U		
Phenanthrene Phenal	6.3 110		284000 (b)	 10200 (a)	2560 (a)	1,700,000			0.71			 	1 U		1.01 U 2.02 U	0.996 U			1.00 U 1.00 U	1.00 U 1.00 U
1986 Add 17 days 1 come common makes which consider to day 1 com	The second second				100010	- AND STREET			200 CAN CASA SERVING CO. O. O.	200000000000000000000000000000000000000					221122	to the second second second	MATERIAL SERVICES			
EPA Method SW8270SIM Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0			***	0.5 U	0.486 U	0.499 U	0.5 L	0.488 U	0.500 U	0.500 U	0.500 U
	15	-	1000	19 (0)	15 (0)	3.0	19	13	3.0				0.5 0	0.400 0	0.423 0	0.5 0	0.400 0	0.300 B	0.300 0	0.300 0
PAHs (µg/L)																				
EPA Method SW8270 - SIM 2-Methylnaphthalene	620		284.000			**							1.6	NA	NA	NA	NA	NA.	NA	NA NA
Acenaphthene	520	WELL ST		1700 (a)	520 (a)	990			996			- L.	010	. NA	0.05 U	0.05	0.0493 U	0.0500 U	0.0500 17	0.0500 U
Acenaphthylene	620 (b)		284,000	STREET, STREET, ST		40.000			40.000				0.1 U 0.1 U	NA NA	0.05 U	0.05 L		0.0500 U 0.0500 U	0.0500 U	0.0500 U
Anthracene Benzo(a)anthracene	13 0.027					0.018			0.018	9.1			0.1 U	NA NA	0.05 U 0.05 U	0.05 t. 0.05 t.		0.0500 U	0.0500 U 0.0500 U	0.0500 U 0.0500 U
Benzi)(a)pyrene	0.014			135,1976	A Maria	0.018			0.018	0.58			0.1 U	7 NA	0.05 U	0.05 U	0.0493 U	-0.0500 U	0.0500 U	0.0500 U
Benzo(b)fluoranthene	6.16 (d)					0.018			0.018				0.1 U 0.1 U	NA NA	0.05 U 0.05 U	0.05 U		0.0500 U 0.0500 U	0.0500 U 0.0500 U	0.0500 U
Benzo(g,b;l)perylene Benzo(k)fluoranthene						0.018	-	-	0.018				0.1 U	NA.	0.05 U	0.05 L		0.0500 U	0.0500 U	0.0500 U
Chrysene						0.018			0.018				0.1 U	NA :	0.05 U	0.05 L		0.0500 U	0.0500 U	0,0500 U
Dibenzofuran Fluoranthene	3.7 5.16			3980 (a)		140	-		140				0.1 U 0.1 U	NA NA	NA 0:05 U	NA 0.05-U	NA 0.0493 U	NA 0.0500 U	NA 0.0500 U	NA 0.0500 U
Fluorene	3.9		and the same	-3800 (a)		5300	**		5300				0.1 U	NA NA	0.05 U	0.05 U		0.0500 U	0.0500 U	0.0500 U
Indeno(1,2,3-cd)pyrene			10.00			0.018			0.018				0.1 U	NA _	0.05 U	0.05 U		0.0500 ∪	0.0500 U	0.0500 U
Naphthalene Phenanthrene	620		284,000 284000 (b)	2300 (a)	620 (a)					680			4.1	NA NA	5.73 0.05 U	5.83 0.05 U	0.503 0.0493 U	0.0500 U	0.0500 U 0.0500 U	0.0500 U 0.0500 U
Pyrene	ozu (u)	E1-12502 GREET	- Promotor inter			4000			4000				0.1 U	NA NA	0.05 U	0.05 U		0.0600	0.0700	0.0500
VOL 477 50 (1-4)																				
VOLATILES (μg/L) EPA Method SW8260																				l
1,2,4-Trimethylbenzene	130(e)		200000 (e)				**			1300			2.2	1 U	3.34	3.58	1 U	0.200 U	0.200 U	0.200 U
1,3,5-Trimethylbenzene 4-Isopropyltoluene	130 (e) 9.8 (f)		200000 (e) 104000 (f)						best and an	1400			3.3 1.6	1.U 1.U	4.24	4.78 1.81	1,63 1,32	0.200 U 0.200 U	0.200 U 0.200 U	0.200 U 0.200 U
Benzene	130		200,000	5300 (a)		51 (g)	74(1)		6.1	1700	13,000			040		0.8 0	0.3 U	0.200 U	0.200 U	0.200 U
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000	75.57.478		29	7.76	50.8	78.8	13.8	0.200 U	0.200 U	0.200 U
Isopropylbenzerve m.p-Xylene	130 13 (h)		200000 (e) 8000 (h)							22000 (i)	- 10 Ar		42 16	. 13.6 = 2 U	24.9 21.6	54.7 33.2	34.4 15.3	0.200 U 0.400 U	0.200 U= 0.400 U	0.200 U 0.400 U
Methyl teri Butyl Ether			3000 (1)			32 W W				31,000	550.000		10	์ จึง	1.0	. 1 U	10	NA NA	NA.	. NA
n-Butylbenzene	130 (e)		200000 (e)				**	Sanca Benandara	**				4.3	2.67	2.16	3.74	3.79	0.200 U	0.200 U	0.200 U
n-Propylbenzene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)					680		***************************************	54 5.5	27,5 1 ∪	41.B 11.3	62.9 10.1	50 1 U	0 200 U 0.500 U	0.200 U 0.500 U	0.200 U 0.500 U
o Xylene	1.8		8000 (h)		William I					22000 (i)			10	TU		1.02	1.87	0.200 U	0.200 U	0.200 U
sec-Butylbenzene	130 (e)		200000 (e)										3.7	2.18	2.15	4.13 1 U	2.8 1 U	0.200 U	0.200 U	0.200 U
tert Buty benzene Toluene	130 (e) 9.8		200000 (e) 104,000	17500 (a)		15,000		Total Control Control	200,000	78,000			1 U 1 U	1 U 1 U	1 U 1 U	1 U	1 U	0.200 U 0.200 U	0.200 U 0.200 U	0.200 U 0.200 U
HYDROCARBONS (mg/L)	J. J		. 0 - 1000			.0,000			200,000				, ,		. 0					
									]											
NWTPH-HCID Gasoline								1		12			NA	NA	NA	NA	NA	0.25 U	0.25 U	0.25 ∪
	M ALL						224						NA.	NA .	. NA	NA	NA	0.63 U		0.63 U
											- 1	- 1								

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													LB	LR	LR	LR	LB .	EP	EP	5P 11
																		i		
[							SCREENING CRIT													
	Oregon	SLVs - Surfa	ice Water	Oregon Ar	nbient Water	r Quality Criteria	National Reco	mmended Water	Quality Criteria		Concentration		l							
Sample Identification:						Fish	-			Construction	Volatilization	Site-	LW7S FY64F	LW7S	LW7S	LW7S	LW7S	GW6-1	GW15-1	GW17-1
Laboratory (dentification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	10/20/2003	0402099-03 2/19/2004	0406059-05 6/9/2004	0408019-01 8/3/2004	0411051-10 11/9/2004	0108238-02 8/31/2001	0108238-04 8/31/2001	0108238-03 8/31/2001
	Aquatic	Dilus	Manning	Acute	Cilibrat	Only	ONC (Acute)	OCC (Official)	1 Only	VVOING	Occupational	Dackground	10/20/2003	2/13/2004	G/2/2004	0/3/2004	1179/2004	0/3//2001	B/31/2001	0/31/2001
NWTPH-Dx																				
TPH-Diesel Range								economic processes and the Constant		Control (detailed to the control of			0.6	0.333	0.651	0.516	0.413	NA NA	NA	NA NA
TRH Motor Oil Range													0.5 U	0.476 U	0.567	0.501 U	0.497 U	NA.	:: NA	NA.
NWTPH-G																				ľ
TPH-Gasoline Range									-	12			2.1	1.2	0.38	1.73	1.63	NA	NA	NA
PRIORITY POLLUTANT										İ			İ							
METALS (mg/L)																				
Arsenic (7060)	0.15 (j) (°)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.012	0.0133	0.0146	0.0143	0.0136	0.0193	0.00705	0.0100
Chromium (6010)	0.011 (k)		25 (k)	0.29(1)	0.065 (i)	3433	0.57	0.074		1 A 4 A 4		0.005	0.005 U	0.005 U	0.0148	0.0146	0.0186	0.00500 U	0.00500 U	0.00500 U
Copper (6010)	0.009	341	53	0.05 (i)	0.011 (I)	AND DESCRIPTION OF STREET	0.013	0.009				0.004	0.003	0.01 U	0.01 U	0.01 U		0.0100 U	0.0100 U	0.0100 U
Lead (7421)	0,0025 (*)	28	323	DESTINATION OF THE PERSON	0.0007 (I)(*)	elektromisterelektrolekter viller viller viller	0.085	0.0025 (*)				0.02	0.001 U	-0.000479	0,0001	0.000792	0.00073	0.00200 U	0.00200 U	0:00200 U
Nickel (6010)	0.052	562 105	38	0.33 (l)	0.052 (f)	4.6 26	0.47	0.052	4.6			0.01 0.015	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.00500 U	0.00500 U	0.00500 U
Znc (6010)	0.120	E 105	1230	0.1 (I)	0.1 (1)	26	0.12	0.12	26			0.015	0.006 U	0.01 U	0.01 U	0,01-⊍	0,01 U	0.0100 U	0.0100 U	0.0100 Ú
BETX (μg/L)			i								i									
EPA Method SW8021B							i			ļ							i			
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA	NA	NA	NA.	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)	FE CHAR	2100			29,000	110,000			NA NA	NA NA	NA NA	NA =		NA NA	NA NA	NA.
Toluene	9.8	Shows Directly 150	104000	17500 (a)	B00870801 988-0	15,000			200,000	78,000			NA.	NA.	NA.	NA NA	NA	NA NA	NA.	NA NA
Xylenes, Total	13 (h)		8000 (h)							22,000			NA	NA	NA NA	NA .	- INA	NA		NA:
N William Co	SER - 2200 1200-1211-181	48-1000-00 2.000	The SEASON STREET, SEC.			CIRCA/IDABOR MEMBERS						**************************************	and the second second second	nace - reserve - serve brazila Medica-cons				e macro-common transcription and a	www.wesv.eges.hgczg.	
DIOXIN/FURANS (ng/L)										1										
EPA Method SW8290										1										l
Total TEQ						5.1E-06		-					NA	NA	NA	NA	NA	NA	NA	NA

E D-1 Page 31 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													AR	AR	AR
							SCREENING CRI	TERIA							
	Oregon S	SLVs - Surfa	ce Water	Oregon Ar	nbient Water	r Quality Criteria		ommended Water	Quality Criteria		Concentration				
Sample Identification:						Fish	l			Construction	Volatilization	Site-	GW20-1	LW10\$	LW10S
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0109006-01 9/4/2001	0402113-01 2/23/2004	0406073-01 6/10/2004
	Aquano	DIIOS	ividititials	Acrite	CHIONIC	Only	CIVIC (Acdie)	CCG (Critonic)	Only	MOINE	CCCupational	Background	9/4/2001	2/23/2004	6/10/2004
SEMIVOLATILES (µg/L)															
EPA Method SW8270										l					
2,4-Dimethylphenol 2 Methylnaphthalene	42 620 (b)		284000 (b)	2120 (a)	ERICE CONT.	850			850				3.00 U	2.97 U	NA NA
Acenaphthene	520			1700 (a)	520 (a)	990		*	990	emente entarios n		***	= 1,00 ປ 1.00 ປ	0.99 U 0.99 U	NA NA
bis(2-Ethylhexyl)phthalate	3.0	8000	73000	1700 (a)	320(1)	2.2			22 1				1.00 U	0.99 U	
Carbazole		**				C State (basic Passe) (in the little)			5.00g/c 7440036 (0040002 + 800)	***			1.00 U	0.99 U	NA NA
Dibenzofuran	3.7								5 45 40 St	经第一批额	VIII TO SECOND		1.00 U	0.99°U	NA NA
Di-n-Butylphthalate	35	800	2,200,000	-	-	4500		-	4500		***		1.00 U	0.99 U	NA NA
Fluorene	3.9					5300			6300				- 1.00 U	0.99 U	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)				-	680			1.00 U	0.99 U	NA
Pentachicrophenol Phenanthrene	15		= 1800	19 (c)	.15 (c)	3.0	19	16	3.0				5.00 U	4 95 U	NA NA
Phenol Phenol	6.3 110		284000 (b)	10200 (a)	2560 (a)	1,700,000							1.00 U 1.00 U	0.99 U 1.98 U	NA NA
	- pro- dua 4. 1991 de	eren 102 100	ATTECHNETICS OF THE PARTY OF	(a) UUSUUE	Chon (a)	1,100,000							Telephone (Cont.)	1.98 U	NA .
EPA Method SW8270SIM															
Pentachiorophenol	15	**	1800	19 (c)	15 (c)	3.0	19	15	3.0				0.500 U	0.493 U	0.478 U
0.411-7-0.1				ĺ											
PAHs (µg/L) EPA Method SW8270 - SIM															
2-Methylnaphthalene	620	_	284,000										NA	NA.	NA.
Acenaphthene	520		204,000	1709 (a)	520 (a)	990			990				0.0600.TJ	NA NA	NA NA
Acenaphthylene	620 (b)		284,000					**					0.0500 U	NA NA	NA NA
Anthracene	13					40,000			40,000				0.0500 U	NA	NA NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1	***	esercian papersulations. 21 - and	0.0500 U	NA	NA
Benzo(a)pyréne	0.014					0.018			0.018	0.63			0.0500 U	i NA	NA.
Benzo(b)fluoranthene	6.16 (d)					0.018		ONT Section 1 -	0.018			name and the second second	0.0500 U	NA	NA
Benzo(g,h,i)perylerie													0.0500 U		NA NA
Benzo(k)fluoranthene Chrysend						0.018			0.018				0.0500 U	NA	NA
Dibenzofuran	3.7					0,018			0.018				0.0500 U NA	NA NA	- NA NA
Fluoranthene	6.16		-	3980 (a)		140			140				0.0590 U	NA NA	NA.
Fluorene	3.9					5300			5300				0.0500 U	NA	NA NA
Indeno(1,2,3-cd)pyrene				***		0.018			0.018				0.0500°U	NA	MA
Naphthalene	620		284,000	2300 (a)	620 (a)					680	**-		0.0500 U	NA	NA
Phenanthrene	620 (b)		_284000 (b)=										0.0500 U	NA NA	NA -
Pyrene		**	1	***		4000			4000				0.0500 U	NA	NA NA
VOLATILES (µg/L)							į		i						1
EPA Method SW8260															ĺ
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			0.200 U	1 U	NA.
1.3,5 I rimethylbenzene	130 (e)		200000 (e)	N Construction and a section						1400			0.200 U	10	NA.
4-Isopropyltoluene	9.8 (f)	_	104000 (f)	District Colors									0.200 U	1 U	NA NA
Benzené	130 7.3		200,000	5300 (a)		51 (g)	3/41		51	1700	13,000		0.200 U	0.4 U	NA
Ethylbenzene Isopropylbenzene			200000 (e) 200000 (e)	32000 (a)		2100			29,000	110,000		 G-xx-x-x-x-x	0.200 U 0.200 U	1 U	NA NA
m,p-Xylene	13 (h)		8000 (h)				-			22000 (i)		***************************************	0.200 U 0.400 U	2 U	NA NA
Methy; tert-Brity! Ether			30 30							31,000	550,000		0.400 U	- I U	NA NA
n-Butylbenzene	130 (e)		200000 (e)	- new Police Transact (198)						-	***		0.200 U	1 U	NA
n-Propylbenzene	130 (c)		200000 (e)										0.200 U	u u	NA.
Naphthalene	620		284,000	2300 (a)	620 (a)					680			0.500 U	1 U	NA
o-Xyfene	1.8		8000 (fi)							22000 (i)			0.200 U	עו	NA
sec-Butylbenzene	130 (e)		200000 (e)										0.200 U	1 U	NA
tert Bulytberizene Toluene	130 (e) 9.8		200000 (e)	17500 (a)	-	15.000	- 107 M2		202.002	70,000			0.200 U	1,0	NA.
· · ·	9.0		104,000	17500 (a)		15,000		-	200,000	78,000			0.200 U	1 U	NA
HYDROCARBONS (mg/L)						İ					1				
NWTPH-HCID							- 1	ļ	I		}	1			
Gasoline	ET ANTENNAMEN HADE				zudakonin-rapa-ra			TOTAL CONTRACTOR		12			0.25 ⊔	NA	NA NA
Diesel													0.63 U	NA	NA NA

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													Afi	AR	AR
Γ				-			SCREENING CRI								
	Oregon S	LVs - Surfa	ice Water	Oregon Ar	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria		Concentration		1		
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammais	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatifization to Outdoor Air Occupational	Site- Specific Background	GW20-1 0109006-01 9/4/2001	LW10S 0402113-01 2/23/2004	LW10S 0406073-01 6/10/2004
NWTPH-Dx															
TPH-Diesel Range	-				-								NA NA	0.25 U	NA
TPH-Motor Oil Range												RA GARAGE	NA NA	0.801 ()	NA.
NWTPH-G				ĺ					l	ŀ					
TPH-Gasoline Range								-	-	12			NA	NA	NA
PRIORITY POLLUTANT METALS (mg/L)								ŀ							
	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.00500 U	0.001 U	NA NA
Chromium (6010)	0.011 (k)		25 (k)	C(29 (I)	0.065 (i)	3433	0.57	0.074				0.005	0.00500 U	0.005 U	NA NA
Copper (6010)	0.009	341	53	0.05 (i)	0.011 (1)		0.013	0.009		-		0.004	0.0100 U	0.01 U	NA_
	0,0025 (*)	28	323	0.043 (l)	0 0007 (1)(*)		0.065	0.0025 (*)				0.02	0.00200 U	0.000428	NA.
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (1)	4.6	0.47	0.052	4.6			0.01	0.00500 U	0.005 U	NA
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	28			0.015	0.0100 U	0.01-U	NA.
BETX (μg/L) EPA Method SW80218									!						
Benzene	130		200000	5300 (a)		51 (g)	NAME OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER		51	1700	13000	producer has produced and	NA NA	NA NA	NA_
Ethylbergene	7,3	27.4	200000 (f)	32000 (a)		2100			29,000	110,000		0.2013.00	NA NA	NA	NA NA
Toluene	9.8		104000	17500 (a)		15,000	enders well a comme		200,000	78,000		-019-385-480-1	NA	NA	NA
Xylenes, Total	13 (h)		8000 (h)							22,000	S. Santa		NA	NA	N/A
DIOXIN/FURANS (ng/L) EPA Method \$W8290 Total TEO	_		_	_	_	5.1E-06		_	_				NA.	NA	NA.

Page 33 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PH II	PHII	PHII	PHII	PHII	PHII
							SCREENING CRI					,					·····		
Sample Identification:	Oregon	SLVs - Sur	face Water	Oregon A	mbient Wate	r Quality Criteria Fish	National Rec	ommended Water	Quality Criteria	Risk-Based Construction	Concentration Volatilization	Site-	B1	В1	B1	D	D	D	J1
Laboratory Identification:	i			Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	FY64D	0402099-01	0408019-02	FY82H	0402105-03	0408036-01	FY64H
Date Collected:	Aquatic	Birds	Mammals		Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/20/2003	2/19/2004	8/3/2004	10/23/2003	2/20/2004	8/5/2004	#######
SEMIVOLATILES (µg/L)																			
EPA Method SW8270									1	1									
2,4-Dimethylphenol	42			2120 (a)	in the second se	850			850	a observative object 1920 V	COOK, SHIPE, JOSE , JOSELI VILINE		4.4	2.87 U					
2-Methylnaphthalene	620 (b)		284000 (b)						990				3 1 U		0.98 U 0.98 U	1 L 1 L			
Acenaphthene bis(2-Ethylhexyl)phthalate	520 3.0	8000	73000	1700 (a)	520 (a)	990 2:2		-	990				6.3						
Carbazole							-			-	***		1 U		0.98 U	1 (			
Dibenzolurari	3.7					Karata in							10			1 L			
Di-n-Butylphthalate	35	800	2,200,000			4500	-		4500				1 U		0.98 U	1 L			
Flycrene	3.9	200				5300			5300				1.0						
Naphthalene Pemachlorophenol	620 16	HEDDE BEFER	284,000	2300 (a) 19 (c)	620 (a)	3.0	5:49:79:55:4	15	3.0	680			3.5 5.2 U	1.23 4.78 U	0.98 U 4.9 U	1 L 5.1 L			
Phenanthrene	6.3	<b>3</b>	1800 284000 (b)	10 (6)	15 (c)	3.0	19		30 00			as the sufficiency	1 U		0.98 U	1 (			
Phenol:			204000 (0)	10200 (a)	2560 (a)	1,700,000					4.		210						
The state of the s			A COMMON TO EMPIRE THE STATE FOR THE	THE REAL PROPERTY.							- SESTIMAN COMPANY		MO-641-1111-186-	SEE CECENTES CONTRACTOR CONTRACTO					
EPA Method SW8270S/M				l									0.50.1	0.40	0.5.11	0.04	0.498 U	0.51	0.65
Pentachiorophenol	15	**	1800	19 (c)	15 (c)	3.0	19	15	3.0				0.52 U	<b>2.46</b> J	0.5 U	0.61	0.498 U	0.5	J 0.65
PAHs (µq/L)								i		1									
EPA Method SW8270 - SIM																			
2-Methylnaphthalene	620	THE LEADER SHE	284,000									Continue Continue State State	NA NA	NA	NA	NA	NA.	NA	NA
Acenaphthene				1700 (a)	520 (a)	990	77		990				NA	NA NA	NA	. NA	NA	7.0020- 6007-6002-70-440-	NA NA
Acenaphthylene Anthracene	620 (b) 13		284,000			40,000			40,000	-	a/A		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	0.027	-		-		0.018			0.016	9.1	***		NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA
Benzo(a)pyrene	0.014					0.018			0.018	0.60			NA.	-NA -	NA	NA NA	NA.	NA NA	NA.
Benzo(b)fluoranthene	6.16 (d)					0.018			0.018	-			NA	NA	NA NA	NA	NA	NA	NA
Benzo(g,h,i)perylene											THE RESERVE THE PERSON NAMED IN COLUMN 1		NA	NA.	NA .	ŅA		NA NA	NA
Benzo(k)fluoranthene Chrysene					-	0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene Dibenzofuran	3.7		Live Committee			0.018			0.018				NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA
Fluoranthene	6.16			- 3980 (a)		140			140	DAME NO		<b>第二条子</b> 臣		NA.	NA.	NA.	NA.	NA.	NA.
Fluorene	3.9			-		5300		-	5300	-			NA	NA	NA NA	NA	NA	NA	NA.
Inderio (1,2,3-od) pyrene				##-EE		0.018			0.018				NA NA	- NA #	NA	NA NA	NA	NA NA	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)					680		***	NA	NA	NA L	NA NA	NA NA	NA NA	NA
Phenanthrene Pyrene	620 (b)		284000 (b)=			4000		- ·	4000				NA NA	NA NA	NA. NA	NA NA	NA NA	NA NA	NA NA
ryletie					-	4000		_	4000				100	110	140	110	14.5	101	101
VOLATILES (μg/L)				ĺ															
EPA Method SW8260								!											
1,2,4-Trimethylbenzene	130(e)		200000 (e)	1000788608600		-	-	-		1300 1400			12 3,6	26.6 9.64	3,13 J 1,15 J	1 U		1 L	
1,3,5-i rimetnylbenzene 4-Isopropyltoluene	130 (e) 9.8 (f)		200000 (e) 104000 (f)	# E	1406 - 742					1900			3,6 1 U		1 <b>15</b> J	1 U	the second secon	1 (	
8-isopropylioliuene Benzene	130	-	200,000	5300 (a)		 51 (g)			51	1700	13,000		5.6	36.9	1.71 J	10		031	
Ethylbenzene	7.3	-	200000 (e)	32000 (a)		2100			29,000	110,000			31	55.2	27.5 J	1 U	1 U	1.0	1 U
Isopropylbenzene	130		200000 (c)										3.3	5.53	1.95 J	1.1	f U		
m,p-Xylene	13 (h)	LINETS ARTHUR TO BUILD	8000 (h)							22000 (i)			40	25.2	20.8 J	1 U		2 L	
Mothyl tert-Butyl-Ether	400 (1)									31,000	550,000	4	NA 1 U	1 U 1 U	1.U 1.U	= NA 1 U		1.0	
n-Butylbenzene n-Propylbenzene	130 (e)		200000 (e) 200000 (e)										1 U	8.05	1 U 2.57 J	10			
m-Propylpenzene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)					680	····	····	9.3 5 U	5.47	1.03 J	5 U	1 U	1.19	
o-Xylene	1,8		204,000 8000 (h)	2000 (a)	the second second		14			22000 (i)	- : : ., · - = :		9.2	15.2	2.6		10		
sec-Butylbenzene	130 (e)		200000 (e)							-			1 U	1 U	1 U	1 U	1 U	1 L	1 U
tert-Butylbenzene	130 (e)		200000 (e)	und a									1.0		יט ו	1 U	のないとなるないののことをはいて 4分子との	- Mot Sign Submitted	THE RESERVE THE PARTY OF THE PA
Toluene	9.8		104,000	17500 (a)		15,000		**	200,000	78,000			2.1	9.07	1 U	1 U	1 U	1 L	1 U
,				•							•								

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													PH II	PHU	PHII	PH II	PH.II:	PHB	PHII
							SCREENING CRE	ERIA				-							
	Oregon	SLVs - Surfa	ace Water	Oregon A	Ambient Water	Quality Criteria	National Rec	ommended Water (	Quality Criteria	Risk-Based C	Concentration		1						
Sample Identification						Fish				Construction	Volatilization	Site-	B1	B1	B1	D	D	D	J1
Laboratory Identification Date Collected		Dist		Fresh	Fresh	Consumption	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air	Specific	FY64D 10/20/2003	0402099-01 2/19/2004	0408019-02	FY82H	0402105-03	0408036-01	FY64H
	Aquatic	Birds	Mammais	Acute	Chronic	Only	UML (Adite)	CCC (Chronic)	Only	1 vvorker	Occupational	Background	10/20/2003	2/19/2004	8/3/2004	10/23/2003	2/20/2004	8/5/2004	#######
HYDROCARBONS (mg/L)				İ															
NWTPH-HCID	1																		
Gasoline									-	12			NA	NA	NA	NA	NA	NA	NA
Diesel													NA	NA :	- NA	NA.	NA.	NA.	NA
NWTPH-Dx																			
TPH-Diesel Range				-				-					2.7	2.26	0.978	NA	NA	NA	NA
TPH-Motor Oli Bange						1000							0.5 U	0.477 ⊍	0.503 U	NA.	NA NA	NA.	NA.
NWTPH-G									l										
TPH-Gasoline Range										12		**-	1.2	2.57	0.652	NA.	NA	NA	NA
PRIORITY POLLUTANT										1									
METALS (mg/L)									İ	İ									
Arsenic (7060)	0.15 (i) (*)	16 (i)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.007	0.00305	0.00636	0.018	0.0213	0.0185	0.006
Chiomium (6010)	0.011 (k)	100)	26 (k)	0.29(l)	0.065 (1)	3433	0.57	0.074	0.00014()	E-0-0-0		0.005	0.006	0.00303 0.005 U	0.005 U			0.019	0.006 0.005 U
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009	Mar of the Control of			0.004	0.015	0.0117	0.01 U			0.01 U	
Leac (7421)	0.0025 (*)	28	323	0.043 (f)	0.0007 (0(*)		0.065	0.0025 (*)				0.02	0.005	0.000657	0.0001 U		0.00211	0.0001	: 0.001 U
Nickel (6010)	0.052	562	38	0.33 (l)	0.052 (1)	4.6	0.47	0.052	4.6	**		0.01	0.01	0.0075	0.005 U	0.01 U		0.005 U	
Zinc (6010)	0 120	105	1230	0.1 (1)	0.1 (I)	26.	0.12	0.12	26			0.015	0.018	0.01 U	0.0166	0.006 U	0.01 U	0.01 U	0.006 U
PETY ( 4)																			
BETX (µg/L) EPA Method SW8021B									!	l									
Benzene	130		200000	5300 (a)	-	51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3	San San San San San San San San San San	200000 (f)	32000 (a)		2100			29,000	110.000	10000		NA NA	NA -	NA NA	NA NA	NA.		NA.
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000			NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		8000 (h)							22,000			- NA	NA NA	NA.	NA.	NΛ	NA .	NA.
				l															
DIOXIN/FURANS (ng/L) EPA Method SW8290						1													
Total TEQ						5.1E-06		_					NA	NA	NA	NA	NA	NA	NA
	,			1						•	,	'	,	1471	1373	1371	1375	1475	. 47%

TABLE D-1
SUMMARY OF DETECTED ANALYTICAL RESULTS
UPPER ZONE GROUNDWATER SAMPLES
PHASE III RI

													PHII	РНШ	PHII	PH II	PHII	PH II	PHII	PH II
						<del> </del>	SCREENING CRI	TERIA					1							
		SLVs - Surfa	ice Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water	Quality Criteria		Concentration	]	1							
Sample Identification				Court	r	Fish	Et-	Freeh	Commission	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	J1 0402105-01	J1 0408019-04	K FY64G	K 0402098-01	K 0406060-01	K 0408020-02	K 0411052-05	LW1S
Laboratory Identification Date Collected		Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh GCC (Chronic)	Organism Only	Worker	Occupational			8/3/2004	#######	2/19/2004	6/9/2004	8/3/2004	11/9/2004	FY64J #######
SEMIVOLATILES (µg/L)							1													
EPA Method SW8270				1									-							
2,4-Dimethylphenoi	42		and the second second	2120 (a)	SAC SARES STATEMENT AND ADDRESS OF THE	850			850				2.89 U	3.02 U		NA	NA	NA	NA	3 U
2-Methylnaphthalene	620 (b)		284000 (b)	4700 (-)	500 (-)			W	000			3.646	0.002.11	1.01 U		NA.	NA.	NA.	NA	1.0
Acenaphthene bis(2-Ethylhexy);phthalate	520 3.0	8000	73000	1700 (a)	520 (a)	990 <b>2.2</b>	-		990				0.963 U 0.963 U	1.01 U 1.01 U		NA NA	NA NA	NA NA	NA NA	1 U
Carbazole										-		Bed commission to reflect the	0.963 U	1.01 U	NA	NA	NA	NA	NA	1 U
Dibenzofutan	3.7			-				9.17					0.963 U	1.01 U			NA.	NA.	NA.	10
Di-n-Butylphthalate	35	800	2,200,000			4500		-	4500 5300				0.963 U 0.963 U	1.01 U 1.01 U	NA NA	NA NA	NA NA	NA NA	NA NA	1 U 1 U
Fluorene Naphthalene	3.9 620	A 4-4	284,000	2300 (a)	620 (a)	5300				680			1.41	1.01 U	NA	NA NA	NA NA	NA.	NA NA	1 U
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				4.82 U	5.03 U		NA.	NA:	NA .	NA NA	5 U
Phenanthrene	6.3	-	284000 (b)		STANDARD CHORD-1007	Languary automation and							0.963 U	1.01 U	NA	NA	NA	NA	NA	1 U
Phenol	110			10200 (a)	2560 (a)	1,700,000							1.93 ld.1	2.0.1 U	NA	NA	NA .	NA	NA NA	2.0
EPA Method SW8270SIM																				
Pentachlorophenol	15	-	1800	19 (c)	15 (c)	3.0	19	15	3.0		***		1.13	0.5 U	NA	NA	NA	NA	NA	0.5 U
PAHs (µg/L)													İ							
EPA Method SW8270 - SIM								l				ł								
2-Methylnaphthalene	620		284,000	-	transferor traditional to			<u> </u>					NA	NA	0.1 U		NA	NA	NA	0.1 U
Acenaphthere	520		004.000	1700 (a)	520 (a)	990			990				NA NA	NA NA	0.1 U 0.1 U		NA NA	NA NA	-NA NA	0.1 U
Acenaphthylene Anthracene	620 (b) 13		284,000			40,000	-		40.000	-			NA NA	NA .	0.10		NA NA	NA NA	NA NA	0.1 U 0.1 U
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA	NA	0.1 U		NA	NA	NA	0.1 U
Benzo(a)pyrene	0.014					0.018	E = 5 0.5		0.018	0.53			NA.	NA NA	0.1 U		NA .	NA.	NA -	0.1 U
Benzo(b)fluoranthene	6.16 (d)		-	-		0.018	7 7		0.018				NA NA	NA NA	0.1 U 0.1 U		NA NA	NA NA	NA NA	0.1 U
Benzo(g,h,i)perylene Benzo(k)fluoranthene	2:000 Tribles			-		0.018			0.018	-			l NA	NA	0.1 U		NA NA	NA NA	NA.	0.1 U
Ghryserie						0.018			0.018				NA.	NA	0.1 U	NA:	NA-	NA NA	NA -	0.1 U
Dibenzofuran	3.7					GWWENE WEST AND THE TOTAL PRO-						Secretary State (S. 1986)	NA	NA	0.1 U		NA	NA	NA	0.1 U
Fluorantherie Fluorene	6.16 3.9			9980 (a)		140 5300			1/40 5300				NA NA	NA NA	0.1 U 0.1 U		NA NA	NA NA	NA NA	0.1 U 0.1 U
Indeno(1,2,3-cd)pyrene	0.0					0.018			0.018				NA /	NA .	010		NA.	NA NA	NA N	01.0
Naphthalene	620	WAL SHEET TOPON TO SHEET	284,000	2300 (a)	620 (a)			-	-	680	Property and the second	-	NA	NA	0.1 U		NA NA	NA	NA NA	0.1 U
Phenanthrene	620 (b)		284000 (b)					-	4000				NA NA	NA NA	0.1 ₩ 0.1 U		NA NA	NA NA	NA NA	0.1 U 0.1 U
Pyrene	-			**		4000			4000	-	***	1	INA	NA	0.10	NA.	INA	INA	NA	0.10
VOLATILES (µg/L)																				
EPA Method SW8260	4004.5		000000 (-)				i			1300			6.76	1 U	NA	NA	NA.	NA	NA	1 U
1,2,4-Trimethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)	-					التحديث مناهد	1400			1.0	1.0		NA NA	NA NA	NA NA	NA I	10
4-Isopropyltoluene	9.8 (f)		104000 (f)		••								1 U	1 U	NA	NA	NA	NA	NA	1 U
Benzene	130		200 000	5300 (a)					51	1700	13,000		04.0	0.3 U	NA.	NA.	NA.	NA_	0.3 U	
Ethylbenzene Isopropylbenzene	7.3 130		200000 (e) 200000 (c)	32000 (a)		2100		-	29,000	110,000			2.82 17	1 U <b>5.58</b> J	NA NA	NA NA	NA NA	NA NA	1 U NA	1 U
m,p-Xylene	13 (h)		8000 (h)		lik H.A.	) (	*-			22000 (i)			2 U	2 U	NA NA	NA NA	NA NA	NA NA	1NA 2 U	1 U
Methyl tert-Butyl Ether									In Phas	31,000	550,000		1 U	1.0	- 1. U	NA -	NA	= NA	NA	NA:
n-Butylbenzene	130 (e)	vialterar rections	200000 (e)							 SAS ABSTRACTOR			1.74	1.06 J	NA	NA	NA	NA	NA	1 U
n-Propylbenzene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)					680			21.7 4.77	14 J 1.47 J	NA NA	NA NA	NA NA	NA NA	NA NA	1 U 5 U
Naphthalene o Xviene	1,8		284,000 8000 (h)	2000 (a)	620 (a)					22000 (I)			4.77 1 U	1.47 J	NA NA	NA NA	NA NA	NA NA	IVA	3.0
sec-Butylbenzene	130 (e)		200000 (e)	-									3.14	1 U	NA	NA	NA	NA	NA NA	1 U
tert-Bulylpenzene	130 (e)		200000 (e)		72. 34					***			10	1.0	- NA	NA .	INA.	NA.	NA .	1.U.
Toluene	9.8	***	104,000	17500 (a)		15,000			200,000	78,000			1 U	1 U	NA	NA	NA	NA	1 U	1 U

7/19/05 \\Edmdata\wproc\231\009\132\Philli RI 071905\Philli RI Rpt\_App D Upper GW 2

Landau Associates

Page 35 of 50

													PHII	PH II	PHII	PHII	PH II	PHII	PHII	PHII
							SCREENING CRIT	ΓERIA												
	Oregon 9	SLVs - Surfa	ce Water	Oregon A	mbient Water	Quality Criteria		ommended Water	Quality Criteria	Risk-Based C	oncentration	T	┪							
Sample Identification:						Fish				Construction	Volatilization	Site-	J1	J1	K	К	K	K	K	LW1S
Laboratory identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0402105-01 2/20/2004	0408019-04 8/3/2004	FY64G ########	0402098-01 2/19/2004	0406060-01 6/9/2004	0408020-02 8/3/2004	0411052-05 11/9/2004	FY64J #######
	Aquanc	Dirus	Maninals	Acute	CHIOTIC	Olly	CIVIC (Acute)	CCC (Chronic)	Only	Vyorkei	Occupational	Background	2/20/2004	0/3/2004	*********	2/19/2004	0/9/2004	6/3/2004	11/9/2004	*******
HYDROCARBONS (mg/L)	l																			
NWTPH-HCID	[							İ												
Gasoline		en en en en en en en en en en en en en e	au Sidosibilitatin eneri denend b		desco - desso - lectro / No. Juli					12		cuttivetociti consi instrucci ins	NA NA	NA	NA	NA NA	NA	NA	NA	NA
Diesel													NA .	NA.	NA NA	- NA	NA NA	NA_	NA_	NA.
NWTPH-Dx									i											
TPH-Diesel Range	*-				to the second		-	The second second		-	***	Marrindra musical 2006, 14696	NA	NA	NA	NA_	NA	NA	NA	NA
TPH-Motor Oil Range	-												L. NA			NA.	, NA	NA .	. NA	■ NA =
NWTPH-G									ŀ			ĺ								
TPH-Gasoline Range								-		12			NA NA	NA	0.25 U	0.100 U	0.100 U	0.100 U	0.100 U	0.25 U
PRIORITY POLLUTANT				l								1								
METALS (mg/L)																				
Arsenic (7060)	0.15 (i) (*)	18 (i)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)		****	1.5	0.0087	0.0114	0.001 U	NA	NA	NA	NA	0.008
Chromium (6010)	0.011 (k)		25 (k)	0.29 (I)	0.065 (1)	3433	0.67	0.074				0.005	0.0232 .)	0.0188	0.005 U	NA.	NÁ	NA	. NA	
Copper (6010)	0.009	341	53	0.05 (f)	0.011 (l)		0.013	0.009				0.004	0.01 U	0.01 U	0.006	NA	NA	NA	NA	0.003
Lead (7421)	0.0025 (*)	28	323	0.043 (I)	0.0007 (l)(*)		0.065	0.0025(*)				0.02	0.000428	0.000317	0.001 C	NA NA	NA.	NA	NA NA	0.001 U
Nickel (6010) Zinc (6010)	0.052	562 105	38 1230	0.33 (i)	0.052 (l) 0.1 (l)	4.6 26	0.47 0.12	0.052 0.12	4.6 26			0.01 0:016	0.0151 0.01 U	0.005 U 0.0121	0.03	NA NA	NA NA	NA NA	NA NA	0.01 U 0.007
and (de) (d)	OF COLUMN		Actor Services	FERNING CO.	30.4741.000	- All	NAME OF TAXABLE PARTY.	CHE STAND TANK	(A) 100 - 65 (A) (A) (A) (A) (A)			COLOR MANAGEMENT	0.00	Choline Mari Allerto		194	DeA .	PERSONAL PROPERTY.	, na	U.GUT
BETX (µg/L)																				
EPA Method SW8021B																				
Benzene	130		200000	5300 (a)		51 (g)	000 - 4000 - 1000 - 1000		51	1700	13000		NA NA	NA	NA	0.4 U				NA
Ethylberizene (19.00)	7.3 9.8		200000 (f) 104000	32000 (a)	20 - Y - T - 2	2100 15,000			29,000 200,000	78,000 78,000			NA NA	NA NA	NA NA	.∦10 1 U			The state of the s	
Xvienes, Lotal	9.8 = 13 (h)		8000 (h)	17500 (a)	-	15,000			200,000	22,000			NA NA	NA NA	NA NA	10				NA NA
yanan ang rang	79 (0)		VANAS (III)						Carried Manager	A COLUMN			Gel=		COL	7.04				CONTRACTOR OF STREET
DIOXIN/FURANS (ng/L)										1										
EPA Method SW8290										1										
Total TEQ			-		-	5.1E-06		-		I -			NA NA	NA	NA	NA	NA	NA	NA	NA

Page 37 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PHII	PHII	PHI	PH 11	PHII	PHIL	PH II
							SCREENING CRI	TERIA												
	Oregon	SLVs - Surfa	ice Water	Oregon A	mbient Water	r Quality Criteria	National Rec	commended Water	Quality Criteria		Concentration		1							
Sample Identification: Laboratory Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW1S 0402098-02	LW1S 0406060-02	LW1S 0408020-01	LW1S 0411052-06	LW11S FY72I	LW11S 0402086-06	LW11S 0406074-09	LW11S 0408035-01
Date Collected:		Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	2/19/2004	6/9/2004	8/3/2004	11/9/2004	10/22/2003	2/18/2004	6/10/2004	8/5/2004
SEMIVOLATILES (µg/L)			"					T	1		· · · · · ·	İ								
EPA Method SW8270							Ì						İ							
2,4-Dimethylphenol	42			2120 (a)		850		-	850				NA.	NA	NA	NA	3 U	2.94 U	3.05 L	3 U
2-Methylhaphthalone	620 (b)		284000 (b)										NA.	NA NA	NA	NA	2.9	4.2	2.07	3.81
Acenaphthene	520			1700 (a)	520 (a)	990	-	S From the control of	990	processing with the second second			NA	NA	NA	NA	1 U			
bis(2-Ethylhexyl)phthalate Carbazole	3.0	0008	73000			2.2			2.2				NA NA	NA NA	NA NA	NA NA	1.0 1.0			
Dibenzoluran -	3.7						-						NA.	NA NA	NA.	NA NA	10			
Di-n-Butylphthalate	35	800	2,200,000	-	-	4500			4500			1.110.000.000.100.000.00	NA	NA NA	NA	NA	1 U		1.02 U	
Fluorene	3.9					5300			5300				NA	NA.	NA.	NA.	.∏ ≟=`i, 1U			
Naphthalene	620		284,000	2300 (a)	620 (a)			-	-	680			NA	NA	NA NA	NA	3.2	9.22	3.55	7.81
Pentachlorophenol Phenanthrene	15 6.3		1800 284000 (b)	19 (c)	15 (c)	3.0	19.	15	3,0				NA NA	NA NA	NA NA	NA NA	900	6350 0.98 U	2130	604
Phenol:	110		284000 (0)		2560 (a)	1,700,000							NA NA	NA NA	NA NA	NA NA	1 U		1,02 U 2,03 U	1 U 2 U
				0200	100		and the second s	Carried to the state of the			All Control of the Co	house the same the same				The same of the sa		the sale and the sale of		
EPA Method SW8270SIM										1										
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA.	NA	NA	NA	NA	NA	NA	NA
PAHs (μg/L)	i						1			l										
EPA Method SW8270 - SIM																				
2-Methylnaphthalene	620		284,000		Microsophia Alexandra		and a proposition between the contractions	-			***		NA	NA	NA NA	NA	NA	NA	NA	NA
Acenaphthene	520			1700 (a)	520 (a)	In Political 22-10	*		990				NA .	NA NA	NA .	NA.	NA.	NA NA	NA.	NA
Acenaphthylene Anthracene	620 (b)		284,000	- FREEZENSE ASSE ASSE		40,000			40,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	0.014					0.018			0.019	0.59			NA.	NA	NA .	NA.	NA NA	NA NA	NA.	NA
Benzo(b)fluoranthene	6.16 (d)	**	-	-		0.018			0.018				NA	NA.	NA	NA	NA NA	NA	NA	NA
Benzo(g,h,i)perylene		je (44.000			***	w							NA.		, NA	NA NA		NA	NA	
Benzo(k)fluoranthene Chrysene			-			0.018 0.018	Si de la		0.018 0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenzofuran	3.7							The state of the s	0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	6.16			3980 (a)		140	- 17- NO.		140				NA.	NA.	NA NA	NA-	NA .	NA NA	NA.	NA NA
Fluorene	3.9					5300		-	5300	-	H JOHN TON Character Well		NA.	NA	NA	NA .	NA	NA	NA	NA
Indeno(1,2,3 cd)pyrene						0.018			0.018				NA.		NA .	NA.	NA NA	NA	NA.	NA .
Naphthalene Phenanthrene	620		284,000	2300 (a)	620 (a)			-		680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	- b20 (U) 					4000			4000	27			NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
										1							,			
VOLATILES (µg/L)									İ	1										
EPA Method SW8260 1.2.4-Trimethylbenzene	130(e)	_	200000 (e)	_	_	_	_	_ ,		1300			NA.	NA	NA	NA	73	<b>160</b> J	99.4	234 J
1,3,5-1 rimethylbenzene	130(e)		200000 (e)							1400	- 26		NA NA	NA NA	NA NA		73 16	34.8	99.4 27.7	234[J 56.7 J
4-Isopropyitoluene	9.8 (f)		104000 (f)						Constitution of the Consti				NA	NA	NA	NA	3.2	4.32 J	3.19	6.91 J
Benzene	1:30		200,000	5000 (a)		51 (g)			51	1700	13,000	w acc	NA -	NA	NA NA	0.3 ∪	2.1	30.3	11.6	9.79 J
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000			NA	NA NA	NA	1 U	14	71.6 J	38.6	83.1 J
Isopropyloenzene m,p-Xylene	130 13 (h)		200000 (c) 8000 (h)							22000 (i)			NA NA	NA NA	NA NA	NA 2.11	7.6	15.9 J	12 59	28.2 J
Methyl tert-Butyl Ether	13 (11)		3000 (11)							31,000	550,000		NA NA	NA NA	NA NA	NA NA	NA	NA NA	1 U	1.0
n-Butylbenzene	130 (e)		200000 (e)							-			NA	NA	NA	NA	3.7 M	3.41 J	2.47	5.42 J
n-Propylbenzene	130 (e)		200000 (e)				Alumate						NA	NA	NA		13	18.6 J	18,1	30,5 0
Naphthalene	620		284,000	2300 (a)	620 (a)					680			NA	NA	NA	NA	5 U	15.1 J	8.95	<b>24.5</b> J
o-Xylene sec-Butylbenzene	1.8 130 (e)		8000 (h) 200000 (e)			-				22000 (i)	- I		NA NA	NA NA	NA NA	1.U NA	23 4.7	123 J 7.19 J	5,49	176 J
sec-butylbenzene tert-Butylbenzene	130 (e) 130 (e)		200000 (e)										NA NA	NA NA	NA NA	NA NA	4.7	7.19 J		8.97 J 1.55 J
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000			NA NA	NA NA	NA	1 U	1 U	1 UJ		1 U
1			· 1	. ,			ı i			i .	1									

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Page 38 of 50

													PH II	PH II	PHII	PHII	PHII	i	PHII	PHIL
							SCREENING CRIT	ΓΕRIA					<u> </u>							<del> </del>
	Oregon 9	SLVs - Surfa	ce Water	Oregon A	Ambient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based C	Concentration		1							
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatifization to Outdoor Air Occupational	Site- Specific Background	LW1S 0402098-02 2/19/2004	LW1S 0406060-02 6/9/2004	LW1S 0408020-01 8/3/2004	LW1S 0411052-06 11/9/2004	LW11S FY72l 10/22/2003	LW11S 0402086-06 2/18/2004	LW11S 0406074-09 6/10/2004	LW11S 0408035-01 8/5/2004
HYDROCARBONS (mg/L)																			***	
NWTPH-HCID																				
Gasoline										12			NA.	NA	NA	NA	NΑ	NA	NA	NA
Diesel								SET FIRE		District.			NA.	NA:	NA NA	NA.	NA.	. NA	NA.	NA NA
NWTPH-Dx																				
TPH-Diesel Range													NA NA	NA	NA	NA	2.3	3.07	NA	NA
TPH Motor Oil Hange					Second II.								NA NA	NA NA	. NA	NA NA	0,5 U	0.573	NA .	NA
NWTPH-G								•		İ		İ								
TPH-Gasoline Range			**					-		12	***		0.100 U	0.100 U	0.100 U	0.100 U	2.8	6.8	NA	NA
PRIORITY POLLUTANT METALS (mg/L)																				
Arsenic (7060)	0.15 (i) (*)	18 (i)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	l NA	NA	NA	NA	0.006	0.00448	0.00458	0.00333
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)	0.065 (I)	3433	0.57	0.074	F07: F 18 18	Maria Bara		0.005	NA.	NA NA	NA-	NA =	0.005 U	0.0069	0.0173	0.0161
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009			~~	0.004	NA	NA	NA	NA	0.002	0.01 U	0.01 U	0.01 U
Lead (7421)	0.0025 (*)	28	323	0.043 (1)	0.0007 (1)(*)		0.065	0.0025 (*)				0.02	NA.	NA.	NA NA	NA NA	0.001 U		0.0001	0:0001 U
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (I)	4.6	0.47	0.052	4.6	Los / sales u	culting-short-different-enter	0.01	NA NA	NA_	NA	NA	0.01 U	0.005 U	0.005 U	0.005 U
Zinc (6010)	0.120	105	1230	0.1 (i)	0.1 (I)	26	0.12	0.12	26			0.015	NA-	- NA	NA	NA.	0.006 U	0.01.U	0.01 U	0.01 U
BETX (µg/L) EPA Method SW8021B																				
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		0.4 ∪	0.3 U	0.3 U	NA	NA	NA	NA	NA
Ethylbenzené	7.3		200000 (f)	32000 (a)		2100			29,000	110,000	-1	art.	10				NA.	NA NA	, NA	NA
Toluene	9.8	**	104000	17500 (a)		15,000			200,000	78,000			1 U	1 U	1 U	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		= 8000 (h)							22,000			10	ΉŪ	1. U		NA	NA.	- NA -	NA.
DIOXIN/FURANS (ng/L) EPA Method SW8290																				
Total TEQ				l		5.1E-06	- 1			[			NA	NA	NA	NA	0.8551	NA	NA	NA

Page 39 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PHII	PHII	PHII	PH II	PHII	PHII	PHII
							SCREENING CRI	TERIA					<del> </del>							
		SLVs - Surf	ace Water	Oregon /	Ambient Water	Quality Criteria	National Red	commended Water	Quality Criteria		Concentration		Ī							
Sample Identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW11S 0411066-09	N 0408066-02	OX1S FY72G	OX15 0402086-07	OX1S 0406074-01	OX1S 0408026-02	OX2S 0402086-09	OX2S 0406074-02
Date Collected		Birds	Mammals		Chronic	Only	CMC (Acute)	GCC (Chronic)	Only	Worker	Occupational		11/11/2004	8/10/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004	2/18/2004	6/10/2004
SEMIVOLATILES (µg/L)	l							1		1					<del></del>					
EPA Method SW8270				1			i													
2,4-Dimethylphenol	42			2120 (a)		850			850				2.92 L	4.48	NA	NA	2.95 U	3 (	J NA	3.07 U
2-Methylnaphthalene	620 (b)		284000 (b)							<b>以外由</b> 正正			1,86	37.7	. NA	NA-	5.53	6.81	NA .	6.53
Acenaphthene	520			1700 (a)	520 (a)	990	-		990		THE RESERVE AND DESIGNATION		0.972 L		NA	NA	0.983 U			1.02 U
bis(2-Ethylhexyl)phthalate Carbazole	3.0	8000	73000			2.2			2.2		****		0.972		NA	NA NA	0.983 U			
Dibenzefuran	3.7												0.972 U 0.972 U		NA NA	NA NA	0.983 U 0.983 U	1 L		1.02 U 1.02 U
Di-n-Butylphthalate	35	800	2,200,000			4500		-	4500			***	0.972 \		NA NA	NA NA	0.983 U	1 L		1.02 U
Fluorene	3.9			100		5300			5300				0.972 6		NA .		0.983 U	10		1.02 U
Naphthalene	620	end demonstration	284,000	2300 (a)	620 (a)			- Andrew Classoc Constituted Made and		680			2.24	53.7	NA	NA NA	10.4	11	NA	13.5
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	. 19	15	30	35.0			184	5 U	NA NA	, NA	58,2	5-L		5030
Phenanthrene Ehenal	6.3		284000 (b)	10200 (8)	2560 (a)	1,700,000	_	-					0.972 U	1,43 2 U	NA NA	NA NA	0.983 U 1.97 U	1 U		1.02 U 2:05 U
MAPOLIOTE, TO THE STATE OF THE	310			- UZUJ (8)	ZUW(d)	1,700,000			104,00,000		2.7 (1.5 (1.5 (1.5 (1.5 (1.5 (1.5 (1.5 (1.5		The state of the s	20	INA	NA.	1.87 U	21	, NA	2NO 0
EPA Method SW8270SIM	i											1								
Pentachlorophenol	15	-	1800	19 (c)	15 (c)	3.0	19	15	3.0	-	100		NA	NA	0.69	62.1	NA	NA	5320	NA
PAHs (µg/L)	1			l			1		ł											
EPA Method SW8270 - SIM																				
2-Methylnaphthalene	620		284,000					-					NA	NA	NA	NA	NA	NA	NA	NA
Agenaphthene				1700 (a)	520 (a)	990			990				- NA	1,16	NA NA	NA	NA.	NA .	NA NA	NA
Acenaphthylene	620 (b)		284,000	Design of the last of									NA	0.253	NA	NA	NA	NA	NA	NA
Anthracene	18						* 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	10.00	40,000				NA.	0.121	NA NA	NA .	NA.	. NA	- NA	NA
Benzo(a)anthracene Benzo(a)pyrene	0.027 0.014	Ti.				0.018 0.018			0.018 0.018	9.1 0.53			NA NA	0.091 0.0806 U	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	6.16 (d)					0.018		120-3404-1400-4400-4504	0.018	- 0.00			NA.	0.0506 U	NA.	NA	NA NA	NA.	NA	NA NA
Benzo(g,h,l)perylene				<b>建</b>				14 P. C.					NA .	0.0506 10	NA NA	NA	NA.	NA NA	NA NA	NA -
Benzo(k)fluoranthene	- The window the section of	na transmission				0.018		and the state of t	0.018				NA	0.0506 U	NA	NA	NA	NA	NA NA	NA
Chrysene						0.018			0.018				- NA	0.0506 U	NA NA	NA NA		. NA	NA,	NA.
Dibenzofuran Flaoranthene	3.7 6.16			2000/100		140			140	ELBOTUME SERVICE			NA NA	NA 0.273	NA NA	NA NA	NA NA	NA NA	NA .	NA
Fluorene	3.9			3980 (a)		5300			5300				NA NA	2,49	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
indeno(1,2,3-cd)pyrene			at the			0,018	and the second		0.018				NA.	0.0506 U	NA NA	NA.	NA NA	NA.	NA.	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)					680			NA	54.5	NA	NA	NA	NA	NA	NA
Phenanthrene	620 (b)	19.3	284000 (b)								obile 🕶 📖	CAM.	NA	1,42	NA NA	NA NA		NA NA	I/ NA	NA .
Pyrene				-		4000			4000				NA	0.273	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L)			i																	
EPA Method SW8260									ļ											
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300	Na han		91.2	518	NA	NA	208	<b>231</b> J	NA	307
1,3,5 Trimethylbenzene	130 (e)		200000 (e)							1400			21.6	124	NA NA	NA	73.5	83 Ji	NA	83,1
4-isopropyltoluene Benzene	9.8 (f)		104000 (f) 200,000	 5300 (a)					51	1700	13,000		4.26 2.38	5.33 424	NA NA	NA NA	6.85	6.84 J	NA NA	10.1 6.51
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000	13,000		21.4	744	NA NA	NA NA	112	118 J	NA NA	91.3
Isopropyloenzene	130		200000 (c)						25,000	110,000			161	61,6	βĮΑ	NA.	35,5	48.7 J	NA.	48.5
m,p-Xylene	13 (h)		8000 (h)							22000 (i)			30.9	904	NA	NA	273	466 J	NA	105
Methyl Iert Butyl Ether									100000	31,000	550,000		10	Tu	NA	NA.	1 U:	1 0	NA .	- Ju
n-Butylbenzene	130 (e)	Sight door persons	200000 (e)										2.94	5.14	NA	NA	4.85	4.21 J	NA	6.92
nePropylbenzene Naphthalene	130 (s) 620		200000 (e) 284,000	2000 (*)	620 (a)		ita e			680	The state of the s		<b>1</b> 4,1 8,69	102 112	NA NA	NA NA	54.7 18.2	47.8 J		62.8
naprinalene o-Xylene	1.8		264,000 8000 (h)	2300 (a)	620 (a)				-	680 22000 (i)			8.69 44,2	112 446	NA NA	NA NA	18.2	17.7 J 161 J	NA NA	22.6 190
sec-Butylbenzene	130 (e)	-	200000 (e)										5.12	4.72	NA	NA NA	9.01	8.09 J	NA NA	22.9
tert-Butylbenzene	130 (e)	2	200000 (e)										1,42	10	NA:	NA	1.95	1.63 J	NA.	2,91
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000			1 U	92.3	NA	NA	4.66	8.87 J	NA	1.19
	1		ı			ı	ı		1		1	I								

7/19/05 \\Edmdata\wproc\231\009\132\Philli Ri 071905\Philli Ri Rpt\_App D Upper GW 2

													PHII	PH II	PHII	PH II	PHII	PHIL	PH#	PHII
							SCREENING CRI								"					
	Oregon	SLVs - Surf	ace Water	Oregon A	Ambient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria	Risk-Based C										
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	LW11S 0411066-09 11/11/2004	N 0408066-02 8/10/2004	OX1S FY72G 10/22/2003	OX1\$ 0402086-07 2/18/2004	OX1S 0406074-01 6/10/2004	OX1S 0408026-02 8/4/2004	OX2S 0402086-09 2/18/2004	OX2S 0406074-02 6/10/2004
HYDROCARBONS (mg/L)																				
NWTPH-HCID	1																			
Gasoline	- 1								-	12			NA.	NA	NA	NA	NA	NA.	NA.	NA
Diesel	1146.		/ HE = = = = = = = = = = = = = = = = = =										NA	NA NA	NA NA	, NA	NA.	NANA	NA NA	NA _
NWTPH-Dx										ļ		ļ								
TPH-Diesel Range								-					NA.	7.65	NA	NA	NA	NA	NA	NA
TPH Motor Oil Range	100	- 3											- NA	0.501 (	NA	NA.	NA.	- NA	NA	NA NA
NWTPH-G				1				i												
TPH-Gasoline Range				ا						12			NA	12	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT								ŀ												
METALS (mg/L)												ļ								
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)	er tale tale and transport tale of	un Neger Auden Chan Gard	1.5	0.00394	0.0373	NA	NA	0.0151	0.00838	NA	0.00361
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)	0.065 (I)	3433	0/67	0.074				0.005	0.0206	0.0165	NA -	NA NA	0.0173	0.0177	, NA	0.0134
Copper (6010) Lead (7421)	0.009	341 28	53 329	0.05 (I) 0.043 (I)	0.011 (l) 0.0007 (l)(*)		0.013	0.009 0.0025 (*).				0.004 0.02	0.01 U 0.00104	0.01 U 0.00733	NA NA	NA NA	0.01 U 0.0001 U	0.01 L 0.000113	NA ENA	0.01 U -0:0001 U
Nickel (6010)	0.0025(-)	<b>26</b> 562	38	0.33 (1)	0.052 (1)	4.6	0.47	0.052	4.6	A STATE OF S	NAME OF THE OWNER.	0.02	0.005 U	0.005 U	NA.	NA NA	0.0078	0.0061	NA NA	0.005 U
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (l)	26	0.12	0.12	26			0.015	0.01 U			NA-	.0.01;EU	0.01 U		0.01 U
BETX (µq/L)																				
EPA Method SW8021B										1										
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA NA	NA	NA_	NA NA	NA NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000			E PASS	NA	NA	THE RESERVE AND COMMENTS OF PERSONS	NA.	NA	NA.	NA
Toluene Xylenes, Fotal	9.8 13 (h)	-	104000	17500 (a)		15,000			200,000	78,000 22,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Ayleries; i drai	19 (N)		8000 (h)		11				Saff to the safe of	ZZ,UV0			NA NA	NA.	N/A	TO THE STATE OF TH	, NA	INA	NA	. NA
DIOXIN/FURANS (ng/L)			ļ	!																
EPA Method SW8290 Total TEQ						5.1E-06							NA	NA	NA	NA	NA	NA	NA	NA
Ibiai I EQ	_	**	- 1	-	**	5.12-06		- 1	-				INA	INA	IVA	1444	NA.	1974	INA	INA

**LE D-1** Page 41 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PH II	PH II	PHII	PHII	PHII	PHIII	PHII	PHII
							SCREENING CRI													
Sample Identification:	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Water	Quality Criteria	National Rec	commended Water	Quality Criteria	Risk-Based C Construction	Volatilization	Site-	OX2S	OX2S	Y Dup of OX2S	OX3S	OX3S	OX3S	OX3S	OX4S
Laboratory identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0408026-03	0411066-10	0411066-02	FY72H	0402086-08	0406074-03	0408026-04	0402086-11
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/4/2004	11/11/2004	11/11/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004	2/18/2004
SEMIVOLATILES (µg/L) EPA Method SW8270								ļ												
2,4-Dimethylphenol	42			2120 (a)		850			850		***		3 U	2.98 L	3 U	NA	NA	2.93 U	13.9	NA
2-Methylnaphthalene	620 (b)		284000 (b)										6.24	8.69 J		NA.	NA	13.5	9,63	NA.
Acenaphthene	520			1700 (a)	520 (a)	990		-	990				1 U			NA	NA	0.977 U		THE RESIDENCE AND ADDRESS OF THE PARTY OF TH
bis(2 Ethylhexyl)phtha ate Carbazole	3.0	8000	73000 	-		2.2			22.				1,0 1 U		1 U 1 U	NA NA	NA NA	0.977 U 0.977 U		
Dibenzofutan	3.7	Lat. Area							3				-10				NA.	0.977 U		
Di-n-Butylphthalate	35	800	2,200,000			4500	-		4500				1 U			NA	NA	0.977 U		
Elucrene Naphthalene	3.9 620		284.000	2300 (a)	620 (a)	6300 -			5300	680			1 U 9.21	0.994 U 10.4 J	1 U 22.2 J	NA NA	NA NA	0.977 U 29.9	1 ( 20.2	
Pentachlorophenol	15		264,000 =1800	19 (c)	15 (c)	3.0	19	15	3.0				1500	727 J	1150	NA NA	NA NA	728	59.2	NA NA
Phenanthrene	6.3		284000 (b)		-			-	-			are	1 U	0.994 U	1 U	NA	NA	0.977 ∪	1 (	J NA
Phenol	110			_10200 (a)	2560 (a)	1,700.000		*					2.0	1 99 U	, 2U	NA.	NA	-1.95 U	15.7	NA
EPA Method SW8270SIM				!				l		1										
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA	NA	NA	130	344	NA	NA	1410
PAHs (µg/L)																				
EPA Method SW8270 - SIM																				
2-Methylnaphthalene	620		284,000							ANTENNA ANTONOS	 		NA NA	NA	NA	NA	NA NA	NA	NA NA	NA
Acenaphthene Acenaphthylene	520 620 (b)		284.000	1700 (a)	520 (a)	990			990				NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene.	. 13				44,	40,000			40,000				NA .	NA.	NA .	NA.	NA.	NA	NA.	NA NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene Benzo(b)fluoranthene	0,014 6.16 (d)	200				0.018 0.018			0,018 0,018	0.59			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,l)perylene												16.73.	NA.	NA F	NA.	NA NA	NA.		NA.	
Benzo(k)fluoranthene		S. MATERIAL STREET, ST.				0.018			0.018				NA	NA	NA	NA	NA	NA	NA	NA
Chrysene Dibenzofuran	3.7					0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	6.16		1.0			140	THE VICTOR		140				NA.	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA
Fluorene	3.9			and the second s		5300	The Management of Assertation and Assertation		5300	-			NA	NA	NA	NA	NA	NA	NA NA	NA
Indeno(1,2,3-cd)pyrene Naphthalene	620		284,000	2300 (a)	620 (a)	0.018			0.018	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA – NA	NA NA	NA NA
Phenanthrene	620 (b)		284000 (b)	2,000 (a)	020 (a)					680			NA .	NA NA	NA NA	NA NA	NA.		NA NA	NA NA
Pyrene		**	-			4000		-	4000		**************************************		NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES (μg/L)												ļ								
EPA Method SW8260																				
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			<b>233</b> J	320 J	212 J	NA	NA	331	360	NA
1,3,5-Trimethylbenzene 4-Isopropyltoluene	130 (e) 9.8 (f)		290900 (e) 104000 (f)							1400		900	72.3 J 9.35 J	78.8 14.6 J	70.1 11.1 J	NA NA	NA NA	92.3	113 12.5	NA NA
Benzene:	130		200,000			51 (g)		Ü	5.1	1700	10.000		9.33 J	3.49	3.67	NA NA	NA NA	130	156	NA NA
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000			74.7 J	48.9	50	NA	NA	206	250	NA
Isopropylbenzene	130 13 (b)		200000 (c) 8000 (h)	10 May 24			*			20000 (1)			39.4 J 89.7 J	32.8 62.7	29.9 61.5	NA.	NA NA	70.1 477	79.1	NA
m,p-Xylene Methyl tert-Butyl Ether	13 (h)		8000 (n)		-					22000 (i) 31,000	550.000		89.7JJ	[62.7] 1-U	61.5 1 U	NA NA	NA NA	4//j	605 1 U	NA NA
n-Butylbenzene	130 (e)		200000 (e)		-								6.37 ⅃	11.2 J	8.71 J	NA	NA	8.37	8.92	NA
n-Propylbenzene	130 (e)		200000 (e)								4 8-16 IS		40.7 J	46	39.4	NA		103	78.4	NA.
Naphthalene o-Xylene	620 1.8	···	284,000 8000 (h)	2300 (a)	620 (a)			-		680 22000 (i)			21.6 J 137 J	23.3 99.2	25.2 110	NA NA	NA NA	48.7 225	50.4 295	NA NA
sec-Butyfbenzene	130 (e)		2000000 (e)			-		-					13.6 J	16	13.4	NA NA	NA NA	15	13	NA NA
tert-Butylbenzene	130 (e)		200000 (e)										2.14 J	2.74	2.22	NA .	NA .	2.81	2.34	NA
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000			1.38 J	1 U	1 U	NA	NA	7.84	21.6	NA

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### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

Page 42 of 50

													PHII	₽H∶II	PHII	PH·II	PHII	PH II	PHII	PH II
							SCREENING CRIT	ERIA					<del> </del>							
	Oregon	SLVs - Surfa	ice Water	Oregon A	mbient Water	Quality Criteria		ommended Water C	Quality Criteria	Risk-Based C	Concentration		1		Υ					
Sample Identification:		-		1		Fish				Construction	Volatilization	Site-	OX2S	OX2S	Dup of OX2S	OX3S	OX3S	OX3S	OX3S	OX4S
Laboratory Identification:		<b>.</b>		Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0408026-03	0411066-10	0411066-02	FY72H	0402086-08	0406074-03	0408026-04	0402086-11
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/4/2004	11/11/2004	11/11/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004	2/18/2004
HYDROCARBONS (mg/L)																				
NWTPH-HCID	1					ĺ			l											
Gasoline				-		p=				12			NA NA	NA	NA	NA	NA	NA	NA	NA
Diesel		Aug.											NA:	NA.	NA.	NA -	- NA	NA.	NA.	NA
NWTPH-Dx												i								
TPH-Diesel Range					-				-				NA NA	NA	NA	NA	NA	NA	NA	NA
TPH-Motor Oil Range									Section by the				NA NA	NA.	NA NA	NA .	NA	NA NA	NA.	NA.
NWTPH-G				1								ĺ								
TPH-Gasoline Range			707	-						12			NA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																				
METALS (mg/L)																				
Arsenic (7060)	0.15 (i) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.00752	0.00915	0.00768	NA	NA	0.0212	0.0148	NA
Chromium (6010)	0.011 (k)	10 10	25 (k)	0.34	0.085 (1)	3433	0.57	0.074	0.00014()			0.005	0.00732 0.005 U		0.0141	NA NA	NA NA	0.0212	0.0159	NA NA
Copper (6010)	0.009	341	53	0.05 (l)	0.011 (I)		0.013	0.009				0.004	0.01 U			NA.	NA.	0.01 U	0.01 U	
Lead (7421)	0 0025 (*)	28	323	0.043 (1)	0.0007 (f)(*)		0.065	0:0025 (*)				0.02	0.000258	0.0401	0.0214 J	NA.	NA.	0.0001 U		NA NA
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.005	0.005 U	NA	NA	0.005 U	0.0435	NA
Zinc (6010)	0.120	105	1230	0.1 (i)	0.1 (I)	26	0.12	0.12	26			0.015	0.01 U	0.0299	0.0247	NA NA	NA:	0.01 U	0.019	NA.
BETX (µg/L) EPA Method SW8021B																				
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	(32000 (a)		2100			29,000	110,000			- NA	NA	NA NA	ŇA	S NA	NA NA	NA.	NA NA
Toluene	9.8	WOMEN BY THE BUT	104000	17500 (a)		15,000	THE RESERVE THE PARTY NAMED IN		200,000	78,000			NA NA	NA.	NA	NA	NA NA	NA	NA	NA
Xylenes Total	-13 (h)		= 8000 (h)							22,000 -			NA =	=NA	ŊA	NA:	NA.	NA	NA -	NA NA
DIOXIN/FURANS (ng/L) EPA Method SW8290 Total TEQ		-		-	-	5.1E-06							0.0292	0.57142	NA	NA	NA	NA	NA	NA

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

**E D-1** Page 43 of 50

PH II PH II

PH II

PH II

PH II

PH.II PR II

													g - x27 CMC, 1 c - 1						,	
			•				SCREENING CRI													
Demole Id. "" "	Oregon	SLVs - Surfa	ace Water	Oregon A	mbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration			0.440	01/50			61/-6	01/	
Sample Identification Laboratory Identification	1			Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	OX4S 0406074-04	OX4S 0408026-05	OX5S FY72A	OX5S 0402086-01	OX5S 0406074-05	OX5S 0408026-06	OX5S 0411066-03	OX6S FY72B
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/10/2004	8/4/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004	11/11/2004	10/22/2003
OCTABLES ( A)									<u> </u>	T										10,22,2000
SEMIVOLATILES (µg/L) EPA Method SW8270								f		i		l	1							
2,4-Dimethylphenol	42			2120 (a)		850			850				2.98 L	7,25	NA	NA	2.92 \	3 (		
2-Methylnaphtbalene	620 (b)		284000 (b)	2120 (a)	_	850			850				2.98 C	7.25 20.7	NA NA	NA NA	2.92 C			
Acenaphthene	520			1700 (a)	520 (a)	990			990		175	775	0.993 L			NA NA	0.973 L			
bis(2-Ethylhexyl)phthalate	A COMPANY OF STREET STREET, ST	8000	73000	- 11 00 (a)	020 (0)	2.2			22	T. H. A. C.			1,42	i i i i i i i i i i i i i i i i i i i		NA NA	0.973 L			
Carbazole				-									0.993 L			NA	0.973 L			
Dibenzoturan	3.7		A CONTRACTOR										0.993 L	1.0	NA.	NA.	0.973 U	r fi	101	
Di-n-Butylphthalate	35	800	2,200,000			4500			4500			***	1.53	1.1 U	NA	NA	0.973 L	1 1 1	J 1.01	J NA
Fluorene:	3.9			***		5300			5300				0 93 U		NA-	NΛ	0.973 L		J 1.01.	I NA
Naphthalene	620		284,000	2300 (a)	620 (a)	GF cristian respirations	empresson conference	Historia songle vivi i i v		680			43.7	28.5	NA	NA	0.973 L			
Pentachlorophenol	16 ===		1000	19 (c)	15 (c)	3.0	19	15	3.0				634	96.7	N.A.	NA	4.86 U			
Phenanthrene	6.3		284000 (b)										0.993 U	1 U	NA	NA_	0.973 L			
Phenol	110			10200 (a)	2560 (a)	1,700,000				B			1.99 U	2 U	. V NA	NA NA	1.95 L	1 2 1	J 2.02	J NA
EPA Method SW8270SIM	1			l			1	I	İ				1							
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA.	NA	0.5 U	0.482 U	NA	NA	NA	2100
								ľ					1							
PAHs (μg/L)																				
EPA Method SW8270 - SIM								1		ļ										
2-Methylnaphthalene Acenaphthene	620 520		284,000			990							NA •••	NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA
Acenaphthylene	620 (b)		284.000	1700 (a)	520 (a)	990			990				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene	13					40,000			40,000				NA.		NA NA	NA NA	NA.	NA NA	NA.	NA NA
Benzo(a)anthracene	0.027		% 1844 - 1840 - 1940 - 174			0.018			0.018	9.1		CONTRACTOR OF THE STATE OF THE	NA NA	NA	NA NA	NA.	NA	NA.	NA NA	NA
Benzo(a)pyrene						0.018			0.018				NA .	NA NA	NA	NA.	NA NA	NA NA	NA.	NA.
Benzo(b)fluoranthene	6.16 (d)					0.018	-	-	0.018		***		NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g.fi.i)perylene		A. 40 IS											NA NA	NA.	NA	NA	NA-	NA	NA	NA.
Benzo(k)fluoranthene	August (Million States) (Indian Sta					0.018			0.018		COMMITTER OF THE PARTY AND THE		NA	NA	NA	NA NA	NA	NA	NA	NA
Chrysene = = =		4	1.0-1.0			0.018			0.018				NA.	NA.	- NA	- NA	NA.	, NA	NA.	NA
Dibenzofuran	3.7	-	######################################	ETABLISME VIEW									NA	NA	NA	NA	NA	NA	NA	NA
Fluorantherie Fluorene	6.16 3.9			3890 (a)		140 5300	+		140 5300				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA.
Indeno(1,2,3±xd)pyrene	3.9		 			0.018			0.018				NA.	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)					680			NA.	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA.
Phenanthrene	620 (b)		284000 (6)			40.					TO GUIDA		NA	NA	NA NA	NA.	NA NA		NA:	NA:
Pyrene					-	4000	**		4000			***	NA	NA	NA	NA	NA	NA	NA	NA
											Ī									
VOLATILES (µg/L)																				
EPA Method SW8260	120/-1		2000000 / 1					!		4000	i	- 1	524	500						
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)							1300			158	532 141	NA NA	NA NA	1 U	1 U		NA NA
4-Isopropyltoluene	9.8 (f)		104000 (e)		-				CHARLEST BE	,4tx			22.3	15.4	NA NA	NA NA	1 U	Marie Control of the	The state of the s	
Benzene	130		200,000	5300 (a)		51 (a)			51	1700	13,000		109	77	NA I	NA NA	0.3 U			
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000			292	303	NA	NA	1 U	1 U		
fsopropylbenzene	130		200000 (c)									200	108	68.2	NA.	NA NA				
m,p-Xylene	13 (h)		8000 (h)				- Contraction Contract Contrac			22000 (i)			236	324	NA	NA	2 U	2 U	2 (	
Methyl tert-Bulyl Ether										31,000	650,000		- 1U	- 1.U	NA NA	NA NA	1.0	ı u		
n-Butylbenzene	130 (e)	wighten independent of the	200000 (e)	and the second s						Ar	The latest the latest		17.7	10.8	NA	NA NA	1 U	1 U		NA
n-Propylbenzene			200000 (e)									-	125	114	. NA	NA.	3 - 31.0			
Naphthalene	620		284,000	2300 (a)	620 (a)					680	THE PERSON NAMED IN COLUMN	ACTUARD CONTRACTOR	64.9	66	NA	NA	1 U	1 υ		
o-Xylene			8000 (h)							22000 ()			318	336	NA	NA NA	10			
sec-Butylbenzene	130 (e) 130 (e)		200000 (e) 200000 (e)								 3-45 (1)		24.6	14.6	NA	NA	1 U	1 U	1 L	
tert-Butylbenzene (# ) Toluene	130 (e) 9.8		104,000 (e)	17500 (a)		15,000			200.000	78,000			3,95 2.77	2:82 6.91	NA NA	NA NA	1 U	. 1U 1U	1 <u>.</u> 1 L	NA NA
. 5.2016	5.0		104,000	. 1000 (a)		10,000		]	200,000	70,000		-	2.11	0.91	INA	INA	1.0	1.0	1.0	INA

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### TABLE D-1 ETECTED ANALYTICAL RESULTS

TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	© ∶енш	PHII	PHO	PH II	PH II	PHII	PHII
							SCREENING CRI	TERIA												
	Oregon :	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria	Risk-Based (			1							
Sample identification:	ļ					Fish				Construction	Volatilization	Site-	OX4S	OX4S	OX5S	OX5S	OX5S	OX5S	OX5S	OX6S
Laboratory Identification: Date Collected:		Plants.		Fresh	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only		to Outdoor Air	Specific	0406074-04	0408026-05	FY72A	0402086-01	0406074-05	0408026-06	0411066-03	FY72B
	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/10/2004	8/4/2004	10/22/2003	2/18/2004	6/10/2004	8/4/2004	11/11/2004	10/22/2003
HYDROCARBONS (mg/L)				İ				]												
NWTPH-HCID				1				1												
Gasoline	'									12			NA	NA	NA	NA	NA	NA	NA	NA
Diesel	• n												NA.	NA:	NA.	- NA	- NA	NA.	NA.	NA.
NWTPH-Dx										1			l							
TPH-Diesel Range		-				-		_					NA NA	NA	NA	NA	NA	NA	NA	NA
TPH-Motor Oil Range					44-	J 75 75							NA.	- NA	NA NA	NA	NA NA	NA NA	NA	NIA.
NWTPH-G										1										
TPH-Gasoline Range								-		12		700	NA	NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT				ĺ						i										
METALS (mg/L)																				
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)		<del></del>	1.5	0.0145	0.0137	NA	NA	0.0095	0.014	0.0135	NA
Chromium (6010)				0.29 (f)	0.065 (I)	3433	0.57	0.074				0.005	0.034	0 005 U	NA.	NA.	0.0126	0.0155	0.005 U	ŊA
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009				0.004	0.0256	0.01 U	NA	NA	0.0001 U			NA
Lead (7421)	0.0025 (*)	28	323 38	0.043 (I)	0.0007 (1)(*)		0.065	0.0025 (1) 0.052				0.02	0:00839	0.00107		NA.	0.000111.			NA.
Nickel (6010) Zinc (6010)	0.052 0.120	562 105	38 1230	0.33 (l) 0.1 (l)	0.052 (l) 0.1 (l)	4.6 26	0.47 6.12	0.052	4.6 26			0.01 0:015	0.0219 0.0674	0.0099 0.0114	NA Mark	NA NA	0.005 L 0.01 L			NA Na
					VI (//		A DESCRIPTION OF STREET				******	0.010	LIOUE -	- AMMAGA		197	0.01.0		0.01-0	2.47-5
BETX (μg/L)																				
EPA Method SW8021B																				
Benzene	130		200000	5300 (a)	Code o paint suspenses	51 (g)			51	1700	13000	MARKET MARKET MARKET CONTRACTOR	NA	NA	NA	NA NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000				III. NA	. NA	NA NA	NA NA	NA.		NA	NA.
Toluene Xvienes, Total	9.8 13 (h)		104000 8000 (h)	17500 (a)		15,000			200,000	78,000 22,000			NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA
Ayleries, rotal	13 (n)		BOYO (D)							22,000			NA NA	NA	NA -	NA .	NA NA	. NA	NA	- NA
DIOXIN/FURANS (ng/L)										1										
EPA Method SW8290										1										
Total TEQ		**				5.1E-06							NA	NA	NA	NA	NA	NA	NA	NA

Page 44 of 50

Page 45 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PHII	PHII	PHII	PH II	PHII	PH II
							SCREENING CRI												
CI- I-I	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration	C:2-	OX6S	OX6S	OX6S	Y Dup of OX6S	OX6S	OX7S	OX7S
Sample Identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	0402086-02	0406074-06	0408026-07	0408026-01	0411066-04	FY72C	0402086-03
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	2/18/2004	6/10/2004	8/4/2004	8/4/2004	11/11/2004	10/22/2003	2/18/2004
SEMIVOLATILES (µg/L)																			
EPA Method SW8270																			
2,4-Dimethylphenol	42			2120 (a)		850	and Communication and the communication of the comm	metrosing - nilstan - ft. small	850				NA NA	3 U	3 (				NA
2-Methylnaphthalene	620 (b)		284000 (b)										NA		The same of the sa	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.			NA NA
Acenaphthene bis(2-Ethylhexyl)phthalate	520 3.0	8000	73000	1700 (a)	520 (a)	990 <b>2,2</b>		-	990 2.2				NA NA	1 U	1 (				NA NA
Carbazole			- 10000	-									NA NA	1 U	1 U				NA NA
Dibenzofuran	3.7			14 4					100				NA NA	10	1.0	Jan Jan 19	0 984 U	. NA	NA
Di-n-Butylphthalate	35	800	2,200,000	Liter Hotel Sept. St		4500			4500	Land to the second of the second	Book Tiller Value Transcount		NA	1 U	1 L				NA
Fluorene	3.9					5300		-	5300				NA NA	111	11		Contract of the Contract of th		NA NA
Naphthalene Pentachlorophenol	620		284,000 1800	2300 (a) 19 (c)	620 (a) 15 (c)	3:0	7 0 7 19	15	3.0	680	21.00		NA NA	3280	604	1 U	624	NA NA	NA NA
Phenanthrene	6.3		284000 (b)								•••	***	NA NA	1 U	1 (		0.984 U		NA NA
Phenol	110			10200 (a)	2560 (a)	1,700,000	PERMIT			7.			NA NA	- 2 U	21	J 2 U	1 97 U	NA NA	NA NA
EPA Method SW8270SIM								Ī		1									
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	i			527	NA	NA	NA	NA	720	166
- Gridding options			1000	10 (0)	10 (0)	0.0		1				l .							
PAHs (µg/L)																			
EPA Method SW8270 - SIM 2-Methylnaphthalene	620		284.000										NA	NA	NA	NA	NA	NA	NA
Acenaphthene	520		204,000	1700 (a)	520 (a)	990			990				NA NA	NA NA	NA NA	NA -	NA.		NA NA
Acenaphthylene	620 (b)		284,000		-				-				NA	NA	NA	NA	NA	NA	NA
Anthracene	18								40,000				AN	NA I	NA_	NA E	NA	NA.	NA.
Benzo(a)anthracene	0.027				- 4 45 F	0.018			0.018	9.1 0.53			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene Benzo(b)fluoranthene	0.014 6.16 (d)					0.018			0.018 0.018	U.08	HITTON III.		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g.h.i)perylene	I I I I I I I I I I I I I I I I I I I			Marie 1				7					NA NA	NA NA	NA.	NA NA	NA.	NA "	NA NA
Benzo(k)fluoranthene				**************************************	#-	0.018		-	0.018		THE RESERVE OF THE PARTY OF THE		NA	NA	NA	NA	NA	NA	NA NA
Chrysene					142	0.018			0.018			N	NA NA	NA :	NA NA	NA .	- NA	NA NA	NA NA
Dibenzofuran Fluoranthene	3.7 6.16					740			140				NA ■NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	3.9					5300	80 60 00 00 00 00 00 00 00 00 00 00 00 00		5300				NA NA	NA NA	NA NA	NA NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene						0.018			0.018				NA.	NA NA	NA.	NA.	NA.	NA .	NA
Naphthalene	620	-	284,000	2300 (a)	620 (a)					680	AND AND AND AND AND AND AND AND AND AND		NA NA	NA	NA NA	NA NA	NA	NA	NA
Phenanthrene	620 (b)		284000 (b)	E-2000		4000			4000				NA NA	NA	NA NA	NA III	NA NA	NA :	NA NA
Pyrene	WA		-		-	4000			4500				NA.	104	NA	INA	NA.	INA	INA.
VOLATILES (μg/L)							[												
EPA Method SW8260										4000				00.7	77.	755		N/C	
1,2,4-Trimethylbenzene	130(e)		200000 (e) 200000 (e)	-				 \$ 60 m3 = = =		1300 1400			NA NA	83.7 17.7	77.6 J 10.9 J	75.9 J 11.9 J	1 U	NA NA	NA NA
3,5-Trimethylbenzene 4-Isopropyltoluene	130 (e) 9.8 (f)	-	104000 (e)	V			CONTROL CASE VIOLE			1400			NA NA	2.71	10.9 a 3.4 J	3.74 J	1 U	NA	NA NA
Benzene	130		200,000	5300 (a)		51 (g)			51	1700	13,000		NA NA	0.3 ⊍	0.8 U		0.3 U	THE RESERVE OF THE PARTY OF THE	NA
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100	The same of the sa	••	29,000	110,000			NA	1.31	1 U		1 U	NA	NA
Isapropylbenzene	130	. 7	200000 (0)							00000 (1)			NA	4.94	2.23 J	Plant - Colored Laboratory of the Colored Colored	1.8	, NA	NA
m,p-Xylene	13 (h)		8000 (h)				 De		-	22000 (i) 31,000	550.000		NA NA	2 U 1 U	2 U 1 U		2 U 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NA NA	NA NA
Metnyl tert Butyl Ether n-Butylbenzene	130 (e)		200000 (e)			er es exemples	91		-	31,000			NA NA	2.06	2.1 J	2,31 J	1 U	NA NA	NA NA
n-Propylbenzene	130 (e)		200000 (e)							w in its			NA NA	9.71	4.69	5.33 u	u i	NA.	NA.
Naphthalene	620		284,000	2300 (a)	620 (a)				0.7	680	2007.200.00		NA	5.3	3.92 J	4.48 J	1 U	NA	NA
o-Xylene	1.8		8000 (h)							22000 (i)			NA NA	5.49	3,11 J	3.36 J	1.U	NA	NA.
sec-Butylbenzene	130 (e)		200000 (e) 200000 (e)	 ME-100-100-100		-			-				NA NA	6.54 1 U	8.04 J	7.9 J	1.5 1 U	NA NA	NA NA
tert Butylbenzene Toluene	130 (e) 9.8		104,000	17500 (a)		15,000	-	<del></del>	200,000	78,000			NA.	1 U	1 U		1 U	NA NA	NA NA
rodono	2.0		104,000			.0,000			200,000	, 0,000	i			. •		. 0			

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Landau Associates

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

LE D-1 Page 48 of 50

													PH II	PHII	PHII	PH II	PH II	PHII	PH II
							SCREENING CRE	TERIA										-	
	Oregon	SLVs - Surfa	ce Water	Oregon A	Ambient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based	Concentration		1			Y			
Sample Identification: Laboratory Identification: Date Collected:		Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	OX6S 0402086-02 2/18/2004	OX6S 0406074-06 6/10/2004	OX6S 0408026-07 8/4/2004	Dup of OX6S 0408026-01 8/4/2004	OX6S 0411066-04 11/11/2004	OX7S FY72C 10/22/2003	OX7S 0402086-03 2/18/2004
HYDROCARBONS (mg/L)																			
NWTPH-HCID												1							
Gasoline										12			NA NA	NA	NA	NA	NA	NA	NA
Diesel													NA.	NA.	NA.	NA	NA -	NA NA	- NA
NWTPH-Dx																			
TPH-Diesel Range	TO SERVICE AND A SERVICE				~								NA NA	NA	NA.	NA	NA	NA	NA
TPH-Motor Oil Range			-				-						NA NA	NA .	NA.	NA .	, NA	NA NA	NA.
NWTPH-G				1				i	İ			ı							
TPH-Gasoline Range				-					-	12			NA NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT									1										
METALS (mg/L)									İ			ł							
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	NA	0.013	0.013	0.0127	0.0133	NA.	NA
Chromium (6010)	0.011 (k)		25 (k)	0.29 (I)	0.065 (I)	3433	0.57	0.074				0.005	NA.	0.0147	0.0127	0.0142	0.005 U	/ NA	NA.
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009				0.004	NA NA	0.0001 U	0.0001 U		0.01 U	NA NA	NA
Lead (7421)	0.0025 (*)	28	323	0.043 (I)	0 0007 (1)(*)		0.065	0.0025 (*)				0.02	NA	0:0001 U				NA.	NA NA
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6		man .	0.01	NA NA	0.005 U	0.005 U		0.25	NA	NA
Zine (6010)	0.120	105	1230	0.1 (t)	0.1 (i)	26	0.12	0.12	26			0.015	NA NA	0:01.0	0.01=€	0.01 U	0.0833	NA	INA NA
BETX (μg/L)																			
EPA Method SW8021B				İ								1							
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000			NA NA	NA.	NA	. NA	NA.	NA NA	NA
Toluene	9.8	-	104000	17500 (a)		15,000			200,000	78,000			NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		8000 (h)							22,000			. NA	NA NA	NA.	NA	. NA	NA	NA NA
DIOXIN/FURANS (ng/L)																			
EPA Method SW8290										1									
Total TEQ			**			5.1E-06	-		_	-			NA	NA	0.0087	NA	0.006561	NA	NA

Page 47 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PH II	PHII	PHII	PHII	PHII	PHII
							SCREENING CRI	TERIA											
	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Water	r Quality Criteria		ommended Water	Quality Criteria		Concentration						Y		
Sample Identification	:					Fish				Construction	Volatilization	Site-	OX7S	OX7S	OX7S	OX8S	Dup of OX8S	OX8S	OX8S
Laboratory Identification Date Collected		Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh OCC (Chronic)	Organism Only	Worker	to Outdoor Air Occupational	Specific Background	0406074-07 6/10/2004	0408026-08 8/4/2004	0411066-05 11/11/2004	FY72E 10/22/2003	FY72D 10/22/2003	0402086-04 2/18/2004	0406074-08 6/10/2004
	1			1					1										
SEMIVOLATILES (µg/L) EPA Method SW8270	1			l						1									
2,4-Dimethylphenol	42			2120 (a)		850			850				2.98 U	3	U 3.01 L	J NA	NA	NA	2.95 U
2-Mothylnaphthalene	620 (b)		284000 (b)						FE 19 10				0.092 U					-NA	0.984 U
Acenaphthene	520		 	1700 (a)	520 (a)	990			990	E SERVICIO DE TOUR			0.992 U	1	AND THE RESIDENCE OF THE PARTY		NA NA	NA	0.984 U
bis(2-Ethylhexyl)phthalate Carbazole	3.0	8000	73000	- 14		2,2			2.2				0.992 U 0.992 U	1	The state of the s		NA NA	NA NA	0.984 U 0.984 U
Dibenzofuran	3.7												0 992 U					NA.	0,984 U
Di-n-Butylphthalate	35	800	2,200,000		**	4500			4500				0.992 U	1	U 1L	I NA	NA	NA	0.984 U
Fluorene	3.9	- M				5300			\$300				. = 0.092 U				NA .	NA.	
Naphthalene Pentachlorophenol	620 15		284,000 1800	2300 (a) 19 (c)	620 (a) 15 (c)	3.0		15	3.0	680	 	 De 1948 de 19	1.86	1.5 130	84.7		NA NA	NA NA	3.38
Phenanthrene	6.3		284000 (b)		10 (0)					-	32 15 WE SEE 16		0.992 U	1		S. ALERS CO. CONTRACTOR STATES CO.	NA NA	NA NA	0.984 U
Phenol	110			10200 (a)	2560 (a)	1,700,000							i is set of 98 U	2	U 2.01 (	NA NA	NA NA	NA.	1.97 U
FD4 M. H. LOWGOTGGG																			
EPA Method SW8270SIM Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0		757		NA	NA	NA	260	300	56.4	NA
- Chaches op 101				10 (0)	10 (0)	4.0	,,,												
PAHs (µg/L)										1									
EPA Method SW8270 - SIM 2-Methylnaphthalene	620		284,000										NA	NA	NA	NA	NA	NA	NA
Acenaphthene	520		204,000	1700 (a)	520 (a)	990			990				NA.	NA.		NA NA	NA NA	NA.	NA.
Acenaphthylene	620 (b)		284,000	10 1 1 2 2 1 1 2 2 1 1 2 2 2 2 2 2 2 2 2						**			NA	NA	NA	NA	NA	NA	NA
Anthracene	13								40,000				NA	NA	diplote@mmus artemos (kratas i dan septiam	NA NA	NA .	. NA	NA .
Benzo(a)anthracene Banzo(a)pyrene	0.027 0.014					0.018 0.018		<del></del>	0.018	9.1 0.63			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	6.16 (d)	-				0.018			0.018	0.00			NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA
Benzo(g,h,i)perylene													NA.	NA.	NA.	N.A.	NA .	NA.	
Benzo(k)fluoranthene						0.018			0.018				NA	NA	NA	NA	NA	NA	NA NA
Chrysene Dibenzofuran	3.7					0.018			0.018	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	6.16			3980 (a)		140			140				NA.	NA.	NA.	NA.	NA NA	NA NA	NA NA
Fluorene	3.9					5300			5300	Ballet Britis William Co.			NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrese	(1 <b>4</b> - 36)					0.018			0.018				NA	. NA	NA NA	NA NA	NA NA	NA .	NA
Naphthalene Phenanthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)				-	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	620 (0)		204/00/10)	ti. ik		4000	-		4000				NA NA	NA	NA	NA	NA NA	NA NA	NA
•								i		l	1								
VOLATILES (µg/L) EPA Method SW8260												I							
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300		Mark.	27.3	54.2	13.2	NA	NA	NA	109
1,3,5-Trimethylbenzene	130 (e)		200000 (e)							1400			3.24	7,29			NA	NA.	32
4-isopropyttoluene	9.8 (f)	No. Appeal - Billion - Apples	104000 (f)				**					]	1 U	1.42			NA	NA	4.03
Benzene Ethylpenzene	130 7.3		200,000 200000 (e)	5200 (a) 32000 (a)		<b>51 (g)</b> 2100			<b>51</b> 29,000	1700 110,000	13,000		03 U 1 U	0.3 t 1.18 J	J 0.3 U 1 U		NA NA	NA NA	0.9 U 3.06
Isopropylbenzene	7.3 130		200000 (e) 200000 (c)	32000 (a)		2100			29,000	110,000			1.23	1.62		NA.	NA P	NA NA	10.6
m,p-Xylene	13 (h)		8000 (h)		-		-	-	-	22000 (i)			2 U	2 (			NA	NA	2 U
Methyl tert-Butyl Ether					1		. 5.				550,000		1.0	d da e			NA .	NA	1.0
n-Butylbenzene	130 (e)		200000 (e)								enggrade desirent		1 U	1.25 J 3.26 J	1 U		NA 5.4	NA NA	3.89
n-Propyloenzenc Nachthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)		-		-	680			1.85 4.59	4.89 J	1 U	NA NA	NA NA	NA NA	19.6 6.04
o-Xylene	1.8			accountary	(a)					22000 (i)			2.79	3.76			NA NA	NA.	12.4
sec-Butylbenzene	130 (e)	The sale of the sa	200000 (e)						**				1.4	3.37 J	1 U	NA	NA	NA NA	20.1
tert/Butylbenzene	130 (e)		200000 (e)							<b>2</b>			10	11			NA NA	NA	2.14
Toluene	9.8		104,000	17500 (a)		15,000		-	200,000	78,000			1 U	1 (	J 1 U	NA	NA	NA	1 U

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													PHII	PHII	PH II	PHIL	PHII	PHII	PHII
							SCREENING CRI	FRIΔ											
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water (	Quality Criteria	Risk-Based C	Concentration						Υ		
Sample Identification: Laboratory Identification: Date Collected:	:[	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	OX7S 0406074-07 6/10/2004	OX7S 0408026-08 8/4/2004	OX7S 0411066-05 11/11/2004	OX8S FY72E 10/22/2003	Dup of OX8S FY72D 10/22/2003	OXBS 0402086-04 2/18/2004	OX8S 0406074-08 6/10/2004
HYDROCARBONS (mg/L)																			
NWTPH-HCID				İ															
Gasoline										12	***		NA.	NA	NA	NA	NA	NA	NA
Diesel	10 to 10 to					7				1000000	THE STATE	DE PROPERTY OF THE PERSON NAMED IN COLUMN TO THE PERSON NAMED IN C	NA NA	NA-	NA NA	NA NA			NA :
NWTPH-Dx																			
TPH-Diesel Range				-									NA	NA	NA	NA	NA	NA.	NA
TPH-Motor Oil Range													NA NA	NA.	NA NA	NA NA	NA	NA ()	NA
NWTPH-G																			
TPH-Gasoline Range	-		**		**			**		12			NA	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																			
METALS (mg/L)				İ		I													
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0105	0.014	0.0178	NA	NA	NA	0.0121
Chromium (6010)	0:011 (k)		25 (k)	0.29 (1)	0.065 (I)	3433	0.57	0.074				0.005	0.0162	0.0139	0:005 U	NA.	NA .	NA .	0.0143
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)	4-	0.013	0.009			Marie Control of Marie Control Control	0.004	0.0001 U	0.0001 U		NA	NA	NA.	0.01 U
Lead (7421)	0 0025 (*)	28	323:		0.0007 (!)(*)	and the second second second	0.065	0.0025 (*)				0.02	0.0001 U	0.0001 E		NA NA	NA.	NA NA	0.0001_U_
Nickel (6010)	0.052	562	38	0.33 (l)	0.052 (1)	4.6	0.47	0.052	4.6	en en en en en en en en en en en en en e	EXPLORED MARK NO STATE CONTROL OF STATE	0.01	0.005 U	0.005 L		NA	NA	NA	0.005 U
Zino (6010)	0.120	105	1230	0.1 (1)	0.1 (l)	26	0.12	0 12	26			0.015	= 0.01 U	0.01	0.0295	NA NA	NA .	NA NA	0.01 U
BETX (µg/L) EPA Method SW8021B			į																
Benzene	130		200000	5300 (a)	-	51 (g)			51	1700	13000		NA .	NA	NA	NA	NA	NA	NA
Ethylpenzene	7.3		200000 (f)=	32000 (a)		2100			28,000	= 110,000			. NA	NA	NA -	NA.	NA NA	NA P	. NA
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000			NA NA	NA.	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		8000-(h)							-22,000			NΛ	NA.	NA	NA	NA NA	NA -	NA
DIOXIN/FURANS (ng/L) EPA Method SW8290 Total TEQ		-				5.1E-06		-					NA	NA	NA	0.0007	NA	NA	NA

Page 49 of 50

### TABLE D-1 SUMMARY OF DETECTED ANALYTICAL RESULTS UPPER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PH II	PHII	PHII
							SCREENING CRI	TERIA				······································				
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based Co			1			
Sample Identification: Laboratory Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	OX8S 0408026-09	OX8S 0411066-06	OX9S 0408035-02	Q 0408056-05
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/4/2004	11/11/2004	8/5/2004	8/9/2004
				1												
SEMIVOLATILES (µg/L) EPA Method SW8270									İ				ŀ			
2,4-Dimethylphenol	42			2120 (a)		850			850				3 1	U 2.89 U	3 U	3.09 U
2-Methylnaphthalene	620 (b)		284000 (b)											U 0 964 U		19.8
Acenaphthene	520			1700 (a)	520 (a)	990	-	-	990	-			1		1 U	6.46
bis(2-Ethylhexyl)phthalate	3.0	8000	73000			2.2			2,2						-1.0	1.03 U
Carbazole							-	-					1 1		1 U	1.03 U
Dibenzoturan 🖟 🖟	3.7												-11	Commence of the Commence of th	1.0	3.79
Di-n-Butylphthalate Fluorene	35 3.9	800	2,200,000			4500 <b>5</b> 300			4500 5300	-			1 U		1 U	1.03 U 4.97
Naphthalene	620		284,000	2300 (a)	620 (a)	5800			0000	680	THE SHARE THE PERSON		1.09	0.964 U	1 U	1.03 U
Pentaculorophenol	15		1800	19 (6)			19	15	30	000			76.8	55	5.0	5.15 U
Phenanthrene	6.3	-	284000 (b)				-						1 (		1 U	1.08
Phenol	110			10200 (1)	2560 (a)	1,700,000				s	1		2.1	J- 1.93 U	2.0	10.7
EPA Method SW8270SIM																
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	NA	NA	NA
i entachiorophenoi	13	=	1000	15 (0)	10 (0)	3.0	19	13	3.0	-			1375	INA	INA	ina.
PAHs (µg/L)																
EPA Method SW8270 - SIM			i													
2-Methylnaphthalene	620		284,000		erosotto ses un resenso con					1 - Marie - 14 1 - 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			NA	NA	NA	NA
Acenaphthene	520	S. 7		1700 (a)	520 (a)	990			990				NA.	NA.	NA .	5.04
Acenaphthylene Anthracene	620 (b)	-	284,000			40,000			40,000		er and and and	4	NA NA	NA NA	NA NA	0.239 0.259
Benzo(a)anthracene	0.027			20 70 (B) 10 C		0.018		AND SECURITIONS OF THE	0.018	9.1			NA NA	NA NA	NA NA	0.0498 U
Benzo(a)pyrene	0.014					0.018			0.018	0.53			NA.	NA NA	NA NA	0.0498 U
Benzo(b)fluoranthene	6.16 (d)		***************************************			0.018	LANCE ZONE DESCRIZONES ABOVE.		0.018			NAMES OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF T	NA	NA	NA	0.0498 U
Benzo(g,h,hperylene							4						NA		NA.	0.0498 U
Benzo(k)fluoranthene				ie salbir viduin opusta		0.018			0.018			STANSON AUTOMOSIS CONTRACTOR	NA	NA.	NA	0.0498 U
Chrysene		340				0.018		3. at 500 kg	0.018		2 (2.15 (2.11 · _ 16) _ 16)		NA NA	NA.	NA	0.0496 U
Dibenzofuran Fluoranthene	3.7 6.15			3980 (a)		140			140				NA NA	NA NA	NA NA	NA 0,488
Fluorene	3.9					5300			5300				NA	NA	NA NA	3.81
Indeno(1,2,3-cd)pyrene						0.018			0.018				NA.	NA NA	NA NA	0.0498 ∪
Naphthalene	620	**	284,000	2300 (a)	620 (a)		**			680	***		NA	NA	NA	0.398
Phenanthrene	620 (b)		284000 (b)										NA.	NA	NA -	0:716
Pyrene						4000	-		4000				NA	NA	NA	0.179
VOLATILES (µg/L)									·			ľ				
EPA Method SW8260									İ			l				
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			101 J	107	1 U	3.47
1,3,5-Trimethylbenzene	130 (e)		200000 (e)				n on the sold of	* -		1400	78 <i></i> 20 a 1		33.6°J		1 U	3.73
4-isopropyltoluene	9.8 (f)		104000 (f)										4.85 J	1.55	1 U	1 U
Benzene	130		200,000	5300 (a)		51 (g)			51	1700	13,000		0.3 U		0.3 ∪	1030
Ethylbenzene Isopropylbenzene	7.3 130		200000 (e) 200000 (e)	32000 (a)		2100			29,000	110,000			4.15 J 12.4 J		1 U [	12.1 78.4
m,p-Xylene	13 (h)		8000 (h)							22000 (i)			2.84 J	2.19	2∪ [	27.4
Methyl tort-Butyl Ether			2000 (11)							31,000	550.000				LUS LUS	10
n-Butylbenzene	130 (e)		200000 (e)							-			4.94 J	2.13	1 U	9.01
n-Propylbenzene	130 (e)		200000 (e)										15.3 J	14.8	4.0	116
Naphthalene	620	ere meneral en en en en en en en en en en en en en	284,000	2300 (a)	620 (a)	SECULATION CONTRACTOR	THE THOUSAND MARKET WHEN THE ACTU		-	680			6.53 J	1 U	1 U	1 U
o-Xylene	1.8		8000 (h)	201020-220-020-020-		***		1		22000 (i)			18.8	20:1		8.17
sec-Butylbenzene	130 (e)		200000 (e) 200000 (e)										19.2 J	10.1	1 U	8.81
tert-Butylbenzene Toluene	130 (e) 9.8		104,000	17500 (a)		15,000			200,000	78,000			<b>2 12</b> J 1 U	1,53 1 U	1 W T	21.2
, 5146716	3.0		,04,000	. , 500 (a)		15,000			200,000	70,000		1	10		, o L	21.2

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Page 50 of 50

													PHII	PHII	PHII	PHII
ı							SCREENING CRIT	TERIA								
	Oregon S	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based (	Concentration					
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	OX8S 0408026-09 8/4/2004	OX8S 0411066-06 11/11/2004	OX9S 0408035-02 8/5/2004	Q 0408056-05 8/9/2004
HYDROCARBONS (mg/L)																
NWTPH-HCID																
Gasoline		_		l						12			NA.	NA	NA	NA
Diesel													NA.	NA NA		
								2			SAMS CONTRACTOR	til metalskafatter ommetalska	one-lieue, losse confidenciales			
NWTPH-Dx									i							
TPH-Diesel Range	927 Steph per 7 (s)					4.6							NA NA	NA NA	NA NA	5.56
IPH-Wotor Oil Hange					or two contracts				September 1				NA.		- NA	0.495 Ų
NWTPH-G																1
TPH-Gasoline Range										12			NA	NA	NA	2.88
						i										
PRIORITY POLLUTANT																
METALS (mg/L)								i								i
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0233	0.0259	0.0044	0.034
Chromium (6010)	0,011 (k)	4	- 25 (k)	0.29 (I)	0.055 (l)	3433	0.57	0.074				0,005	0.0123	0.0136	0,0156	0.017
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009			ALC BASE - ERECT PRINTER	0.004	0.01 L		0.01 U	0.01 U
Lead (7421)	0 0025 (*)	28	323		0.0007 (I)(*)		0.065	0.0025 (*)			4	0,02	0.0001 L		0.0001 U	0.00735
Nickel (6010)	0.052	562	38 1230	0.33 (I)	0.052 (I)	4.6 26	0.47	0.052 0.12	4.6 26			0.01 0.015	0.005 U 0.01 U		0.005 U	0.005 U 0.01 U
Zinc (6010)	0.120	1.05	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26		100	0.015	0.01 C	0.0139	0.01 U	0.01-0
BETX (μg/L)																
EPA Method SW8021B										i	ŀ					ľ
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA
Ethylberizene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000	13000		NA.	NA NA	NA NA	NA I
Toluene	9.8		104000	17500 (a)		15.000	1860 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930 / 1930	Principal Committee Commit	200,000	78,000			NA NA	NA	NA	NA
Xylenes, Total	13 (h)		6000 (n)							22,000			Y NA	NA .	NA.	NA NA
THE RESERVE OF THE PARTY OF THE						7777	er mane - ene mane and ene and energy		Section of the Control of the Contro	AND LABOR : FT SALES CONTINUES					SELECTED STREET, SERVICE STREE	to manage the same of the same
DIOXIN/FURANS (ng/L) EPA Method SW8290						-										
Total TEQ						5.1E-06							NA	NA	NA	NA

Page 1 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF
		•	***************************************		· · · · · · · · · · · · · · · · · · ·		SCREENING CRIT	TERIA					-					
İ	Oregon	SLVs - Surfa	ace Water	Oregon A	mblent Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration		1					
Sample Identification:				Coreb	C	Fish	Const	Farab	Oranniam	Construction and Excavation	Volatilization	Site- Specific	G1A FY82N	G1A 0402105-04	G1A 0406039-03	G1A 0408044-06	G1A 0411051-06	LW4D FY82L
Laboratory Identification: Date Collected:		Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Worker	to Outdoor Air Occupational	Background	10/24/2003	2/20/2004	6/7/2004	8/6/2004	11/9/2004	10/24/2003
	Aquatic	Ditua	Niaminais	Acoto	Officials	Only	I ONIO (Acuto)	COC (CHICHIC)	J Olay	TVOIAC!	Особранона	Duckground	10/24/2000	BEGEOOT	0772004	01012004	71707600-7	10/2-12000
SEMIVOLATILES (µg/L)													l					
EPA Method SW8270	٠			0400 (1)		050			000					0.00.11	0.40.11			9.11
2,4-Dimethylphenol 2-Methylnaphthalene	42 620 (b)		284000 (b)	2120 (a)		850			850				3 U	3.08 U 1.03 U	3.19 U 1.06 U	3 1		
Acenaphthene	520		204000(0)	1700 (a)	520 (a)	990			990				1 U	1.03 U	1.06 U		U 1.01 U	
bis(2-Ethylhexyl)phthalate	3.0	8000	73000	1700 (d)	100 (0)	2.2	<b></b> .		2.2			7 47 5 5 6	1.0				u 1.01 U	
Carbazole	**		**										1 U	1.03 U	1.06 U	1	U 1.01 U	
Dibenzofuran	3.7										disam 3		1.0	1 03 U	1 06 U		U 1.01 U	
Di-n-Butylphthalate	35	800	2,200,000		-	4500	-		4500				1 U	1.03 U	1.06 U		U 1.01 U	
Fluorene	3.9					5300			5300				1 U	1.03 U	1.08 U		U 1.01 U	
Naphthalene	620 15		284,000 1800	2300 (a) 19 (c)	620 (a) 15 (c)	3:0	19	15	9.0	680			1 U	1.03 U 5.14 U	1.06 U 5.32 U	1 5.22	U 1.01 U	1 U
Pentachlorophenol Phenanthrene	6.3	-	284000 (b)	19-10)	19:10)	3.0	18		2 A S A S A S A S A S A S A S A S A S A				1∪	1.03 U	1.06 U	3.4c		1 U
Phenoi	110		204000 (b)	10200 (a)	2560 (a)	1.700.000								2.06 U	WORKSHOOT SEEDS WITH SE			
			and the second second second	TOWNS TO SHEET VERY PER	marristras (* 1862)			and the all the second of the	THE PROPERTY OF THE PARTY OF TH	**************************************		- Service College Service (Service Ser	EN TO SERVICE OF SERVICE SERVICES	MARK TANDEST AND THE ASSESSED SERVICE		a management with		and manufacture reserves at \$100.00
EPA Method SW8270SIM									1									
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-	***		0.5 U	0.478 U	0.507 U	NA	0.478 U	0.5 U
PAHs (μg/L)																		
EPA Method SW8270 - SIM									İ									
2-Methytnaphthalene	620		284,000										NA	NA	NA	NA	NA	NA
Acenaphthene	520		- X X	1700 (a)	520 (a)	990			990				ina in	NA NA	. NA	NA.	NA NA	NA.
Acenaphthylene	620 (b)		284,000				-						NA	NA NA	NA	NA	NA	NA
Anthracene	- 13 -					40,000			40,000	- 6		1 0 5	NA NA	NA	NA NA	. NA	NA.	NA.
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.014					0.018	¥		0,018	0.53			NA NA	NA NA	NA.	NA:	CONTRACTOR CONTRACTOR DA	NA NA
Benzo(b)fluoranthene Benzo(g,f);i)perylene	6.16 (d)	-				0.018	-		0.018	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene						0.018		-	0.018		10 10 10 10		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene						0.018			0.018				NA.	NA NA	NA.	NA.	NA .	NA
Dibenzofuran	3.7		**						**				NA	NA	NA	NA	NA	NA
Fluoranthene	6.16	<b>M</b> 4.3		3980 (a)		140			140				NA NA	NA .	, NA	NA.	NA.	NA.
Fluorene	3.9					5300			5300	SET AND THE CONTRACTOR			NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)gyrene						0.018			0.018			and the second	NA	NA.	NA	NA.	NA NA	-NA
Naphthalene Phenanthrene	620		284,000	2300 (a)	620 (a)		-		-	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene Pyrene	620 (b)		284000 (b)	10		4000			4000				NA.	NA NA	NA NA	NA NA	NA NA	NA NA
ryiene	-		-			4000	-		4000				110	NO	ing.	110	144	IVA
VOLATILES (μg/L)																		
EPA Method SW8260											1							
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			1 U	1 U	1 U 1 U	1 (		1.4
1.3.5 Trimethylbenzene	130 (e)		200000 (6)							1400_	****		1 U 1 U	1 U	1 U	1	the Committee of the Co	Charles - Article - Victorian I represent the
4-Isopropyltoluene Benzene	9.8 (f) 130		104000 (f) 200;000	5300 (a)					51	1760	13,000		10		e at at daux	0.3		1 U
Ethylbenzene	7.3	CANAL PROPERTY.	200000 (e)	32000 (a)		2100			29,000	110,000			1 []	1 U	1 U	1 1		1 U
Isopropylbenzene	130	2 2 6	200000 (e)	22000 (4)					20,000	2 2 2	La Company		150	67.2	105	118	86.6	
m,p-Xylene	13 (h)	man Periods, ISBN 1	8000 (h)	**						22000 (i)			1 U	2 U	2 U	2 (		1 U
Methyl tert-Butyl Ether			PA 3-0-1			47.07				31,000	550,000	·	NA.	1.0	1 U			NA
n-Butylbenzene	130 (e)		200000 (e)				**		THE REPORT OF THE PARTY.		-001-000-001-001-001		10	4.23	15	8.97	14	1 U
n-Propylbenzene	130 (e)		200000 (e)		Company and the second								130 .	57.1	112	99.6	. 114	1.6,
Naphthalene	620		284,000	2300 (a)	620 (a)					680			5 U	1 U	1 U	2.49	1 U	5 U
c-Xylene	1,8		8000 (h)	**	***					22000 (i)	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10		1 U 17	1 U 7.93	27.5	1 U 16.8	J 1.4 24.5	1 U
sec-Butylbenzene tert Butylbenzene	130 (e) 130 (e)	-	200000 (e) 200000 (e)		-					H-N=		- <u>-</u>	3.5		27.5 5.1	16.8		
Toluene	9.8	-	104,000	17500 (a)		15,000			200,000	78,000			1 U	1 U	1 U	1 (	THE RESERVE OF THE PARTY OF THE	1 U
			,	555 (4)		,	l		,	,	I	ı	. •		. •		, ,	

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													MTF	NAME OF	" MTE	MTF	MTF	MTF
					·		SCREENING CRIT	ERIA										
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water C	Quality Criteria	Risk-Based C			1					
Sample Identification:						Fish				Construction	Volatilization	Site-	G1A	G1A	G1A	G1A	G1A	LW4D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	FY82N 10/24/2003	0402105-04	0406039-03	0408044-06	0411051-06	FY82L
	Aquanc	Birds	Mammais	Acute	Chronic	Uniy	CMC (Actire)	CCC (Crironic)	Only	yvorker	Occupational	Background	10/24/2003	2/20/2004	6/7/2004	8/6/2004	11/9/2004	10/24/2003
HYDROCARBONS (mg/L)																		
NWTPH-HCID											1							
Gasoline									-	12			NA.	NA.	NA	NA	NA	NA
Diesel	7.00		-			# 18 E						and the second	NA	NA.	NA NA	NA.	NA NA	NA.
NWTPH-Dx				İ														
TPH-Diesel Range				l									2.2	2.39 J	3.98	3.25	3.13	1.6
TP Motor Oil Range					8 <del>.</del>								0.5 U	0.491 UJ	0.536 €	0.507.1	0.502 U	0.5 U
NWTPH-G																		
TPH-Gasoline Range										12		***	NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT												i						
METALS (mg/L)																		
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.035	0.0324	0.0326	0.0293	0.0295	0.028
Chromium (6010)	0.011 (k)		- 25 (k)	0.29 (I)	0.065 (I)	3433	0.57	0.074				- 0.005	0.01	0.0077	0.0155	0.0156	0.0203	0.009
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (l)		0.013	0.009		-		0.004	0.007	0.0346	0.01 U	0.01 U	0.01 U	0.006
Lead (7421)	0.0025 (*)	28	323		0.0007 (I)(*)		0.066	0.0025 (1)		te		0.02	0,003	0.00043	0.000437	0.000658	0.00395	0.001 U
Nickel (6010)	0.052	562 105	38 1230	0.33 (I)	0.052 (1)	4.6 26	0.47	0.052 0.12	4.6 - <b>2</b> 6			0.01	0.08	0.0997	0.0955	0.13	0.13	0.01 U
Zinc (6010)	0.120	105		0,1 (1)	0.1 (1)	<b>∠</b> b	0,12	0.12	20			0.015	0.021	0.01 U	0.0102	0,01 5	0.0243	0.017
BETX (µg/L)											ľ							
EPA Method SW8021B																		
Веплепе	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA NA
Ethylberizene	7.3		2000000 (f)	32000 (a)		2100			29,000	110,000	-		(VA	NA NA	NA	∴	NA .	- NA
Toluene	9.8		104000	17500 (a)	AND CONTRACTOR	15,000		- Side til Sertisk - medi	200,000	78,000 22,900			NA	NA Na	NA NA	NA	NA	NA NA
Xylenes, Total	13 (h)		8000 (h)			100				22,000	- 100 Maria		NA	INA	NA	NA,	NA-	NA.
DIOXIN/FURANS (ng/L)												i						
EPA Method SW8290						1				1	- 1	ł						
Total TEQ				-		5.1E-06			-*		1		NA	NA	NA	NA	NA	NA

TABLE D-2 Page 3 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MIE	MTF	MTF	MTF	MTF
							SCREENING CRIT											
Sample Identification:		SLVs - Surfa	ace Water	Oregon A	nbient Water	Quality Criteria Fish	National Rec	ommended Water	Quality Criteria	Risk-Based ( Construction	Volatilization	Site-	LW4D	LW4DR	LW6D	LW6D	LW6D	LW6D
Laboratory Identification:	c			Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0402113-08	0411151-01	FY82O	0402105-05	0406039-01	0408044-07
Date Collected	: Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	2/23/2004	11/29/2004	10/24/2003	2/20/2004	6/7/2004	8/6/2004
SEMIVOLATILES (µg/L)	İ											İ	İ					
EPA Method SW8270 2,4-Dimethylphenol	42			2120 (a)		850	_		850	1			2.89 U	2.98 U	3.1 U	2.88 U	2.99 U	3 U
2 Methylnaphthalene			284000 (b)	2120 (8)		000			030				11.7	0.994.0	3.1 U	0.961 U		
Acenaphthene	520	miletratile relevant	Electriciscs and a second	1700 (a)	520 (a)	990			990	-			0.964 U	0.994 U	1 U	0.961 U	0.998 U	1 U
bis(2-Elhylhexyl)phthalate Carbazole	30	8000	73000			2.2			2.2		-		0.964 U	2.83	1 U	0.961 U		
Dipenzofuran	3.7												0.964 U 0.964 U		1 U	0.961 U 0.961 U	0.998 U 0.998 U	1 U
Di-n-Butylphthalate	35	800	2,200,000			4500			4500				0.964 U	0.994 U	1 U	0.961 U	0.998 U	1 U
Fluorene	3.9 620		004.000	2000 (4)	200 (-)	5300			5300	000			0.964 U		1 U			10
Naphthalene Pentachlorophenol	15		284,000 1800	2300 (a) 19 (c)	620 (a) 15 (c)	3.0	19	15	3.0	680			4.12 8.95	0.994 U 4.97 U	1 U 5.1 U	0.961 U 48 U	0.998 U 4.99 U	1 U 5 U
Phenanthrene	6.3		284000 (b)			-						***	0.964 U		1 U	0.961 U	0.998 U	1 U
Phenol	110-			10200 (a)	2560 (a)	1,700,000						200	1.93 U	1.99 U	2 ∪	1.92 U	2 U	=2 IJ
EPA Method SW8270SIM									l									
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	1.08	1.1	0.483 U	0.498 U	0.5 U
PAHs (µg/L)										l								
EPA Method SW8270 - SIM																		
2-Methylnaphthalene	620		284,000	POTANIA PROSEED PARA		Was a color of the color of the color					economic action of the company		NA NA	NA	NA NA	NA NA	NA NA	NA
Acenaphthene Acenaphthylene	520 620 (b)		284,000	1700 (a)	520 (a)	990			990				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene	13		204,000			40,000			40,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA 1
Benzo(a)anthracene	0.027		-		-	0.018			0.018	9.1			NA NA	NA	NA	NA NA	NA NA	NA
Benzo(a)pyrene Benzo(b)fluoranthene	0.014 6.16 (d)				. 'n	0.018			0.018 0.018	0.53		-	NA NA	NA.	NA.	NA .	NA NA	NA.
Benzo(g,h,i)perylene	6.16 (u)					0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene	TOTAL CONTRACTOR OF THE PARTY O	**				0.018			0.018				NA	NA	NA	NA	NA	NA
Chrysene Dibenzofuran	3.7					0.018	10.1		0.018				NA NA	NA NA	NA:	NA NA	. NA	NA.
Pluoranthene:	6.16			3980 (a)		140			140				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	3.9					5300			5300				NA	NA	NA	NA	NA	NA
indeho(1-2-3-cd)pyrene Naphthalene	620		284,000	2300 (a)	620 (a)	0.018			0.018	000			NA	NA	NA	NA NA	NA	NA
Phonanthrene			284,000 284000 (b)	2300 (a)	620 (a)				-	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene		ein mitein meinen sentr			-	4000			4000				NA	NA	NA NA	NA.	NA	NA
VOLATILES (μg/L)									į į									
EPA Method SW8260						İ		l										
1,2,4-Trimetrylbenzene	130(e)		200000 (e)	PERAFERENCE -						1300			1 U	1.9	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene 4-Isopropyltoluene	130 (e) 9.8 (f)		200000 (e) 104000 (f)			- T				14095			1 U 1 U	# 2 ±10 . 1 ∪	1 U.	1 <b>U</b> .	1 U	1 U
Benzerie	130		200,000	5300 (a)		51 (g)		- 4.82	51	1700	13,000		0.4 U		10	0.4.U	0.8 U	0.3-U
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100		-	29,000	110,000			1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene m.p-Xylene	130 13 (h)	-	200000 (e) 8000 (h)					-		22000 (I)			<b>2,46</b> 2 U	1.51	4.2		2.05	
Methyl tert-Butyl Ether	13 (n)		0000 (II)							22000 (I) 31,000	550,000		2 U	2 U 1 U	1 U NA	2 U	2 U	2 U
n-Butylbenzene	130 (e)		200000 (e)					-	-		***		1 U	1 U	1 U	1 U	1 U	1 U
n Propylbenzene		4 *	200000 (e)									West St.			1.0		1 U	1.0
Naphthalene o-Xylene	620 1.8		284,000 8000 (h)	2300 (a)	620 (a)					680 22000 (i)		 	1 U	4.29 1=U	5 U	1 U	1 U	1 U
sec-Butylbenzene	130 (e)	-	200000 (e)							- Leady (II			1 U	1 U	2.1	1.27	1 U	1.29
tert-Buty/benzene			200000 (e)										U	1 0	2.9	1 U	1.76	2.09
Toluene	9.8	-	104,000	17500 (a)		15,000	-	- 1	200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U

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													MTF	MTF	MTE	MTF	MTF	MTF * *
							SCREENING CRI	TERIA										
:	Oregon 9	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria	Risk-Based C	Concentration		1					
Sample Identification:						Fish			1	Construction	Volatilization	Site-	LW4D	LW4DR	LW6D	LW6D	LW6D	LW6D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific	0402113-08 2/23/2004	0411151-01 11/29/2004	FY82O 10/24/2003	0402105-05 2/20/2004	0406039-01 6/7/2004	0408044-07
	Aquatic	Dilus	Mammas	ACULE	Critoric	Only	CMC (Acute)	CCC (Chronic)	Unity	Worker	Occupational	Background	2/23/2004	11/29/2004	10/24/2003	2/20/2004	6/7/2004	8/6/2004
HYDROCARBONS (mg/L)									ŀ									
NWTPH-HCID										İ								
Gasoline	**								-	12			NA.	NA	N/A	NA	NA	NA
Diesel											***		NA .	ΝA	- NA	NA	NA.	I, NA
NWTPH-Dx																		
TPH-Diesel Range			**										1	0.353	1.1	1.36 J	1.9	2.05
TPH-Motor Oil Bange							* * * * * * * * * * * * * * * * * * * *						0.504 L	0.529	0.5 U	0.491-U.	l 0.51-U	0.474 U
NWTPH-G				1														
TPH-Gasoline Range										12	****		NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																		
METALS (mg/L) Arsenic (7060)	0.45 (0.49)	40 m		0.34	0.15	0.00044 (-1/4)	0.04.00	0.45(%)	0.0004.44			1.5	0.031	0.0101				
Chromium (6010)	0.15 (j) (*) 0.011 (k)	18 (j)	25 (K)	0.34	0.065 (f)	0.00014 (g)(*) 3433	0.34 (*) 0.57	0.15 (*) 0.074	0.00014 (*)		 	1.5 0.005	0.031	0.0101	0.016	0.0154 0.0101	0.0131 0.0208	0.0153 0.0187
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009	We want to the second			0.004	0.01 L			0.01 U	0.0200 0.01 U	0.01 U
Lead (7421)	0.0025 (*)	28	323		0.0007 (I)(*)		0.065	0.0025 (*)				0.02	0.00097	0.00202	0.003	0.000873	0.000216	0.000252
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.005 U		0.01 U	0.005 U	0.005 U	0.005 U
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26			0.015	0.01 U	0.19	0.013	0.01 U	0,01 U	0.01-U
				-														
BETX (µg/L) EPA Method SW8021B				l						1								
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)					29.000	110,000	13000		NA NA		NA .	NA NA	NA NA	NA NA
Toluene	9.8		104000	17500 (a)	**	15,000	DESIGNATION AND THE STATE OF TH	2 TO 2 TO 2 TO 2 TO 2 TO 2 TO 2 TO 2 TO	200.000	78,000			NA	NA	NA	NA	NA NA	NA NA
-Xylories, Total	13 (h)		8000 (h)		484				era de la com	22,000			NA	NA.	- NA	NA NA	NA .	NA.
DIOXIN/FURANS (ng/L)								l		1								
EPA Method SW8290 Total TEO						5.1E-06				1			NA.	NA	NA	NA	NA	NA
TOTAL TEX	•		-	ı ~	••	5.16-06	-		-	1	1		NA	INA	NA	INA	NA	NA

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

												MTF	MTF	MTF	MTF	MTF	MTF
						SCREENING CRI								-			
Sample Identification		Vs - Surface Water	Oregon A	mbient Wate	r Quality Criteria Fish	National Rec	ommended Water (	Quality Criteria	Risk-Based Construction	Concentration Volatilization	Site-	LW6D	LW9D	LW9D	LW9D	LW9D	LW9D
Laboratory Identification			Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0411051-07	FY82M	0402105-08	0406039-02	0408044-05	0411051-02
Date Collected	1: Aquatic	Birds Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	11/9/2004	10/24/2003	2/20/2004	6/7/2004	8/6/2004	11/9/2004
SEMIVOLATILES (µg/L)																	
EPA Method SW8270									1								
2,4-Dimethylphenol 2-Methylnaphthalene	42	284000 (b)	2120 (a)	-	850		-	850				3.12 U 1.04 U	3.1 U	2.87 U	3.41 U	3 U	THE RESERVE AND THE PROPERTY AND THE PERSON NAMED IN COLUMN TWO PERSONS AND THE PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN TWO PERSON NAMED IN COLUMN T
Acenaphthene	620 (b) 520	284000 (8)	1700 (a)	520 (a)	990			990				1.04 U	1 U 1 U	0.958 U 0.958 U	1.14 U 1.14 U	1 U	
bis(2:Ethylhexy/)phthalate		8000 73000						2.2	100 W W W			1.04 U		0.958 U	1.14 U	1-U	
Carbazole	A 5-1984 PER SECTION AND ADDRESS	TORSE IN SERVICE CONTRACTOR		earnement of the large							e over to the hope hours	1.04 U	1 U	0.958 U	1.14 U	1 U	
Diberizoturan Di-n-Butylphthalate	3.7 35	800 2,200,000			4500			4500			2.,, 35	1.04 U 1.04 U	1.⊍ 1 ∪	0.958 U 0.958 U	1.14 U 1.14 U	1 U	
Fluorene	3.9	800 2,200,000	-		5300			5300				1.04 U	1.0	0.958 U	114 U	10	
Naphthalene	620	284,000	2300 (a)	620 (a)					680			1.04 U	1 U	0.958 U	1.14 U	1 U	1 U
Pentachlorophenol	15	1800	19 (c)		3.0	19	. 15	3.0				5.21 U	5.1 U	4.79 ∪	5,68 Ü	5 U	
Phenanthrene Phenol	6.3 110	284000 (b)	10200 (a)	 2560 (a)	1,700,000		-	- 				1.04 U 2.08 U	1 U 2 U	0.958 U 1,92 U	1.14 U 2.27 Ü	1 U	
E DANSMITTER TO SERVICE STATE OF THE SERVICE STATE STATE OF THE SERVICE	110		JULUU (a)	EUUV (d)	1,700,000	t mennen Mennen in dise			pressible Mary (MI)	tipe sa selection and	the state of the s		11-15-1-15-1-4 VIII	1.02 0		20	
EPA Method SW8270SIM	1																
Pentachlorophenol	15	1800	19 (c)	15 (c)	3.0	19	15	3.0	-			0.495 U	0.51 U	0.495 U	0.494 U	0.5 U	0.504 U
PAHs (µg/L)																	
EPA Method SW8270 - SIM									<u> </u>								
2-Methylnaphthalene Acenaphthene	620 520	284,000	 1700 (a)	520 (a)				990				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene	620 (b)	284,000	(a)	azu (a)		-						NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene	13				40,000			40,000			3 - 3,5	- NA -	- NA	- NA	NAIL III	ni NA	- NA
Benzo(a)anthracene	0.027				0.018			0.018	9.1			NA NA	NA	NA	NA	NA	NA
Benzo(a)pyrene Benzo(b)fluoranthene	0,014 6.16 (d)			-	0,018 0.018		-	0.018	0.53			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene		Section 1						0.010		-0-		NA.	NA NA	NA NA	NA.	NA .	NA NA
Benzo(k)fluoranthene					0.018	-		0.018	**			NA	NA	NA	NA NA	NA NA	NA
Chrysene	The Shoulder of the San San		190		0.018			0.018				NA NA	NA NA	NA NA	NA .	NA NA	NA
Dibenzofuran Flüoranthene	3.7 6.18		73980 (a)		140			140				NA NA		NA NA	NA NA	NA NA	NA NA
Fluorene	3.9				5300			5300				NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene					0.018			0.018		1 - C + N A	10 Sept. 10	- NA	NA -	NA	NA NA	NA	NA.
Naphthalene Phenanthrene	620 620 (b)	284,000 284000 (b)	2300 (a)	620 (a)				-	680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene					4000			4000	* are or Character			NA NA	NA NA	NA NA	NA NA	NA NA	NA
•																	
VOLATILES (µg/L) EPA Method SW8260																	
1,2,4-Trimethylbenzene	130(e)	200000 (e)				_		-	1300			1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	130 (e)	200000 (e)							1400		0.00	1.0	1.0	10	1.0	1.0	1 Ü
4-isopropyltoluene	9.8 (f)	104000 (f)				for the first special control of the first						1 U	1 U	1 U	1 U	1 U	1 U
Benzene Etnylbenzene	130 7.3	200,000 200000 (e)	32000 (a)		<b>51 (g)</b> 2100			51 29,000	1700 110,000	13,000		0.3 U 1 U	1 U = 1 U	0.4 U 1 U	-03 U 1 U	.03 U 1 U	0.3°Un 1 U
Isopropylbenzone	130	200000 (e)	32000 (a)		2100			28,000	110,000			2,39	12	4.36	10	17,6	1.74
m.p-Xyfene	13 (h)	8000 (h)							22000 (i)	Alleger from the contract of t		2 U	1 U	2 U	2 U	2 U	2 U
Methyl tert Butyl Ether	D. Sales Sales			THE STATE OF THE	· · · · · · ·		× 100		31,000	.550,000		10	NA	1 U	1.0	10	, cu
n-Bulylbenzene in Propylbenzene	130 (e) 130 (e)	200000 (e)										1 U	1 U 5.4	1 U 1.16	1 U	1 U 8.72	1 U
Naphthalene	620	284,000	2300 (a)	620 (a)					680			1 U	5 U	1 U	1 U	1 U	1 U
g-Xylene		8000 (h)	. Ario						22000 (i)			1.38	1 U	1 U	1.0	1 U	1 U
sec-Butylbenzene	130 (e)	200000 (e)	In SECURITY AND ADDRESS.									1.09	1.3	1 U	1 U	1.03	1 U
fert Butylbenzene Toluene	130 (e) 9.8	- 200000 (e) 104,000	17500 (a)		15,000			200,000	78,000			3,23 1 U	1 U 1 U	1:U 1:U	1 U 1 U	1 U 1 U	1,03 1 U
	5.5	.0.,500			.0,000	ı	J	200,000	. 0,000		1	. 3	. •	. 0	. 0	, 0	

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BZTO104(e)023557

Page 5 of 40

													MTF	MTF	MTF	MTF	MTF	MTF:
ı							SCREENING CRI	FRIA							<del></del>			
	Oregon S	LVs - Surfa	ce Water	Oregon A	mbient Water	Quality Criteria		ommended Water	Quality Criteria	Risk-Based 0	Concentration		1					
Sample Identification:						Fish				Construction	Volatilization	Site-	LW6D	LW9D	LW9D	LW9D	LW9D	LW9D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0411051-07 11/9/2004	FY82M 10/24/2003	0402105-08 2/20/2004	0406039-02 6/7/2004	0408044-05 8/6/2004	0411051-02 11/9/2004
	Aqualic	DIIU8	Mammais	Acute	CHROTIC	Only	ONC (Acute)	CCC (Critoric)	City	vvoiker	Occupational	Background	11/9/2004	10/24/2003	2/20/20/04	6///2004	8/6/2004	11/9/2004
HYDROCARBONS (mg/L)				İ					1									
NWTPH-HCID																		
Gasoline										12			NA NA	NA	NA NA	NA	NA	NA
Diesel						A Sec.						and the second second	NA.	NA.	NA NA	. NA	NA NA	NA
NWTPH-Dx				İ				İ				1	ł					
TPH-Diesel Range						<del></del>				-			1.9	0.25 U	0.246 UJ	0.246 U	0.254	U 0.289
TPH-Motor Oil Range													0.509 U	0.5 U	0.492 UJ	0.492 U	0.508	J 0:514 U
NWTPH-G												l						
TPH-Gasoline Range										12			NA NA	NA	NA	NA	NA	NA
1																		
PRIORITY POLLUTANT													i					
METALS (mg/L)		45.00				0.0004.6.1.18		0.48.00										
Arsenic (7060) Chromium (6010)	0.15 (j) (*) 0.011 (k)	18 (j)	6 25 (k)	0.34 0.29 (i)	0.15 0:065 (I)	0.00014 (g)(*) 3433	0.34 (*)	0.15 (*) 0.074	0.00014 (*)			1.5	0.014 0.0182	0.038	0.0301 0.0101	0.0272	0.0307 0.0175	0.0458 0.0182
Copper (6010)	0.009	341	53	0.05 (i)	0.003 (i)	9490	0.013	0.009		-		0.005	0.01 U	0.012	0.01 U	0.01 U	0.0175 0.01 U	
	0.0025 (*)	28	323		0.0007 (I)(*)		0.065	0.0025 (*)				0.02	0.00042	0.002	0.000656	0.000597	0.000788	
Nickel (6010)	0.052	562	38	0.33 (l)	0.052 (1)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.01 U	0.005 U	0.005 U	0.005 L	
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26			0.015	0.01 U	0.027	0.01 ₩	0.01 ∪	0.01-1	J 0:0124 U
BETX (µg/L) EPA Method SW8021B																		
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA
Ethylpenzene	7.3		200000 (f)	32000 (a)		2100			29.000	110,000	13000		NA NA	NA.	NA NA	NA.	NA NA	
Toluene	9.8	··	104000	17500 (a)	**************************************	15,000	And the same of th	-5,10-422/120-00-00-00-00-00-00-00-00-00-00-00-00-0	200,000	78,000			NA	NA	NA	NA	NA NA	NA
Xyenes, Tolal	13_(h)		8000 (h)							22,000			NA	NA.	NA NA	NA.	NA NA	NA
DIOXIN/FURANS (ng/L)										ŀ								
EPA Method SW8290 Total TEO						5.1E-06		+		[			NA.	NA	NA	NA	NA.	NA
iolai reg		-			***	3.1E-00	- 1	1		-			INA	NA	NA	Avi	NA	NA

Page 7 of 40

### BZTO104(e)023559

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	Second Te	MTF	MTF	MTF
							SCREENING CRI	TERIA										
	Oreg	on SLVs - Su	rface Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based	Concentration	]	-					
Sample Identification:						Fish	ł			Construction	Volatilization	Site-	LW14D	LW14D	LW14D	LW16D	LW17D	LW17D
Laboratory Identification:		Diada	Managerala	Fresh	Fresh	Consumption	Fresh	Fresh CCC (Chronic)	Organism	and Excavation		Specific	FY82C	0402113-03	0408036-05	0408036-04	FY82G	0402105-06
Date Collected:	Aquatic	Birds	Mammais	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/23/2003	2/23/2004	8/5/2004	8/5/2004	10/23/2003	2/20/2004
SEMIVOLATILES (µg/L)							ŀ					•						
EPA Method SW8270													l					
2,4-Dimethylphenol	42			2120 (a)	nasi-suntenges	850			850				N/ N/		NA NA	NA NA	NA NA	NA NA
Methylnaphthalene     Acenaphthene	620 (b) 520		284000 (b)	1700 (a)	520 (a)	990			990				N/		NA NA	NA NA	NA NA	NA NA
bis(2-Ethythexy)phthalate	3.0	8000	73000	1700 (a)		2.2			22				NO.		NA NA	NA.	NA NA	
Carbazole	- particular Contract				n manes receives	**		**		-			N/	The second secon	NA	NA	NA	NA
Dibenzoluran	3.7								1000				- N/	NA NA	NA.	NA T	- NA	NA .
Di-n-Butylphthalate	35	800	2,200,000	-	W-	4500			4500				N/		NA	NA	NA NA	NA
Fluorene	3.9				in the great of	5300		# 8 to 1	5300			ica es <del>t</del>		NA NA	mine (annual method " - Petron of		NA NA	NA.
Naphthalene	620		284,000	2300 (a)	620 (a)					680	 		N/		NA NA	NA	NA NA	NA
Peritachilorophenoi	15 6.3		1800 284000 (b)	19 (c)	15 (c)	3.0	19	15	3.0				N/		NA NA	NA. NA	NA NA	NA NA
Phenanthrene Phenol	110		284000 (0)	10200 (a)	9560 (a)	1,700,900				Mr All Control			N/		NA.	NA NA		NA:
110180	nersold V			-ineut (a)	eson fan	Liconido				Call Hardeness State and Committee	materia a pipel Pil Taring 2 a person		Cadatin-Stationary			44/1	reconstant the IMP of	A CARLO STATE OF THE STATE OF T
EPA Method SW8270SIM												]	l					
Pentachlorophenol	15	**	1800	19 (c)	15 (c)	3.0	19	15	3.0				0.5	5 U 0.557 U	0.5	J 0.5 U	0.51 U	0.497 U
PAHs (µg/L)																		
EPA Method SW8270 - SIM				İ									l					
2-Methylnaphthalene	620		284,000						_				N.A	NA NA	NA	NA	NA	NA
Acenaphthene	520			1700 (a)	520 (a)	990			990	7 T 4 15			NA	NA NA	. NA	NA.	NA.	NA
Acenaphthylene	620 (b)	**	284,000										NA.		NA NA	NA NA	NA	NA
Anthracene	13					40,000		pile*	40,000				NA NA		NA.	ALL LONG DOMESTIC CONTRACTOR OF THE PARTY OF		N/A
Benzo(a)anthracene	0.027			-		0.018			0.018	9.1			NA.		NA	NA	NA	NA
Benzo(a)pyrene	0.014		-			0.018			0.018	0.53			NA NA		NA NA	NA. NA	NA NA	NA NA
Benzo(b)fluoranthene Benzo(g,h,l)perylene	6.16 (d)					0.018			0.018				NA NA		NA NA			NA NA
Benzo(k)fluoranthene	72-889-55-85N		-			0.018		FIRMUS CONTRACTOR	0.018			Bajni Dajiman propinsi pagire.	NA		NA.	NA	NA.	NA.
Chrysene						0.018	erent butter		0.018				NA NA		n NA	NA:		. NA
Dibenzofuran	3.7	NO.		-									NA.	NA.	NA	NA	NA	NA
Huoranthene.	6.16			9980 (a)					140				NA.	THE CONTRACTOR OF THE CONTRACT	NA.	- NA-	. NA	N/A
Fluorene	3.9	-		HARRIST TRUTHS		5300			5300	**			NA NA		NA	NA NA	NA NA	NA
Indeno(1,2,3-cd)pyrene	200		004.000	0000 /-		0.018			0.018	680			NA NA		NA NA	NA NA	NA NA	NA NA
Naphthalene Phenanthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)					680			VALANTERS - NEED - MARCH - I		NA NA	NA NA	NA NA	NA NA
Pyrene	pzu (u)		THE PERSON AND THE			4000			4000			<b>建设设施。一部产业的</b> 有	NA		NA NA	NA NA	NA NA	NA NA
7,510				ĺ														
VOLATILES (µg/L)																		
EPA Method SW8260														***				
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	130(e) 130 (e)	-	200000 (e)	1002 400				0.4		1300 1400			NA NA		NA NA	NA NA	NA NA	NA NA
4-Isopropyltoluene	9.8 (f)		200000 (e) 104000 (f)		AND THE PERSON NAMED IN	CONTRACTOR OF THE PARTY OF THE				1400			NA NA		NA NA	NA NA	NA NA	NA
Benzene	130		200,000	5300 (a)		51 (g)				1700	13,000		NA.	Acres (CO) - approximation are an approximation of the contraction of	9-7551-9789-157995-10-17-VO-		NA NA	NA .
Ethylbenzene	7.3	**	200000 (e)	32000 (a)	Arne of Armedick - Jelowson	2100		**	29,000	110,000			NA		NA	NA	NA	NA
Isopropylbenzene	130		200000 (e)										. NA	S NA	NA NA	NA.	NA NA	NA
m,p-Xylene	13 (h)		8000 (h)	en Arman Millight (Children and Allert Arman)	The second section is a second			-		22000 (i)			NA		NA	NA	NA	NA
Methyl tert-Butyl Ether								*		31,000	550,000		NA		NA.	NA NA	NA,	NA NA
n-Butylbenzene	130 (e)	 Preconsise	200000 (e)										NA		NA NA	NA NA	NA NA	NA
n-Propybenzene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)					680	100-100-100-1		NA NA		NA NA	NA NA	NA NA	NA NA
Naphthalene o Xylene	1.8		284,000 8000 (h)	2000 (a)	020 (a)					22000 (i)		ACTIVITY OF	NA NA		NA.	NA NA		NA NA
sec-Butylbenzene	130 (e)		200000 (e)		-		-	-		- answer to			NA	The party of the p	NA NA	NA NA	NA NA	NA NA
tert-Bulylbenzone	130 (e)		200000 (e)										NA.			NA	NA NA	NA.
Toluene	9.8	**	104,000	17500 (a)	-	15,000			200,000	78,000			NA	NA	NA	NA	NA	NA
l l											I.							

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													MTF	MTF	MTF	MTF "	MTF	MTF
							SCREENING CRI	reria					<del> </del>					
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria		Concentration		1					
Sample Identification:				L .		Fish		1	1	Construction	Volatilization	Site-	LW14D	LW14D	LW14D	LW16D	LW17D	LW17D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	FY82C 10/23/2003	0402113-03 2/23/2004	0408036-05 8/5/2004	0408036-04 8/5/2004	FY82G 10/23/2003	0402105-06 2/20/2004
	лации	Unico	Warming	AGDIG	GIIIOIIIO	Omy	ONIC (Actio)		1 01119	- WOINE	Оссоранона	Dackground	10/20/2000	2/23/2004	0/0/2004	8/3/2004	10/23/2003	2/20/2004
HYDROCARBONS (mg/L)									1									
NWTPH-HCID	l							l										
Gasoline		SERVICE ADDRESS ADD			Lander State Company				-	12			NA	NA	NA	NA	NA	NA Natracasement arrangement
Diesel							e dian di						NA	NA.	NA NA	. NA	NA -	NA NA
NWTPH-Dx																		
TPH-Diesel Range							## TO THE THE PARTY OF THE PART						NA NA	NA	NA	NA	NA	NA
TPH-Motor Oil Bange						-16					e e		NA .	NA NA	ŅA	NA	. NA	NA NA
NWTPH-G								İ										
TPH-Gasoline Range			-	-						12			NA.	NA	NA	NA	NA	NA
PRIORITY POLLUTANT METALS (mg/L)																		
Arsenic (7060)	0.15 (j) (*)	18 (i)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	NA	NA	NA	NA	NA	NA
Chromium (6010)	0.011 (k)	# 12 W		0.29 (1)	0.065 (1)	3439	0.57	0.074	0.00014()	DESCRIPTION OF THE		0.005	NA I		NA.	NA NA	NA NA	
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (l)		0.013	0.009		Comment and the Comment of the Comme	· ·	0,004	NA	NA	NA	NA	NA NA	NA
Lead (7421)	0.0025 (*)	28	323	0.043 (1)	0.0007 (I)(*)		0.065	0.0025 (*)			2	0.02	NA S	NA.	NA	NA	AVA	NA .
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6	na		0.01	NA	NA	NA NA	NA	NA NA	NA
Zino (8010)	0 120	105	1230	0.1 (1)	0.1 (1)	26	012	0.12	26	黄旗 煞		0.015	NA	NA.	NA	NA.	NA NA	NA NA
BETX (μg/L)																		
EPA Method SW8021B																		
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	130,000	1004-1016	4	NA	NA .	NA.	NA NA	. NA	NA.
Toluene	9.8	En. Marchanis - Inner	104000	17500 (a)		15,000			200,000	78,000			NA	NA NA	NA NA	NA	NA NA	NA
Xylenes, Total	13 (h)		8000 (n)		\$=8 <b>-</b> 0	- 15				22,000			NA NA	NA NA	NA NA	NA NA	NΛ	NA
DIOXIN/FURANS (ng/L)																		
EPA Method SW8290											- 1	1						
Total TEQ				W No.		5.1E-06	-			*-	***		NA	NA	NA	NA	NA	NA

Page 9 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MIF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRI												
Sample Identification:	Oregon S	SLVs - Surf	ace Water	Oregon A	mbient Wate	r Quality Criteria Fish	National Rec	commended Water	Quality Criteria	Risk-Based 6 Construction	Concentration Volatilization	Site-	LW17D	LW17D	LW18D	LW18D	LW18D	LW18D	LW20D
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0408044-08	0411051-08	FY82F	0402105-07	0408044-04	0411051-05	FZ04N
Date Collected:	: Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/6/2004	11/9/2004	10/23/2003	2/20/2004	8/6/2004	11/9/2004	10/28/2003
SEMIVOLATILES (µg/L)																			
EPA Method SW8270				04004-1		0.50	ŀ	1	850				l NA	NA	NA	NA	NA	NA	3 U
2,4-Dimethylphenol 2-Methylnaphthalene	42 620 (b)		284000 (b)	2120 (a)		850			850				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	3 U
Acenaphthene	520		POST ARREASE	1700 (a)	520 (a)	990			990			***	NA NA	NA	NA	NA	NA	NA	1 U
bis(2-Ethylhexyl)phthalate	3.0	. 8000	73000	65 at 1		2.2			. 22			# 15 E. J.	NA.	NA.			NA NA		3.9
Carbazole Dibenzoluran	3.7		**			-	-		_		 		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1 U
Di-n-Butylphthalate	35	800	2,200,000			4500		-	4500	-			NA	NA	NA	NA NA	NA NA	NA NA	1 U
Fluorene 1997	3.9	101 (1010)							5300				NA	NA.	NA .	. NA	NA NA	. NA	1 U
Naphthalene	620		284,000	2300 (a)	620 (a)					680			NA	NA	NA	NA	NA	NA	1 U
Pentachlorophenol Phenanthrene	15 6.3		1800 284000 (b)	19 (c)	15 (c)	3,0	19	15	3.0				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	5 U 1 U
Plano	110	4	204000 (b)	10200 (a)	2560 (a)	1,700,000						Jan Arabia	NA.	- NA		NA.	TA THA	NA.	
EDA MANA A ONGOZOGIA									1										
EPA Method SW8270SIM Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				0.5 U	0.495 U	0.58	0.488 U	0.5 U	J 0.5 U	NA
•			1000	10 (0)	10 (2)	0.0			0.0										
PAHs (µg/L) EPA Method SW8270 - SIM	l																		
2-Methylnaphthalene	620		284,000										NA.	NA	NA	NA	NA	NA	0.1 U
Acenaphthene	520			1700 (a)	520 (a)	990			990				NA.	NA	NA T	NA.	ŇA	NA	01 U
Acenaphthylene	620 (b)		284,000	-			-		49.000				NA	NA NA	NA NA	NA	NA	NA NA	0.1 U
Anthracene Benzo(a)anthracene	13 0.027	-	-			40,000 0.018			0.018	9.1	100		NA NA	NA NA	NA NA	NA NA	NA NA	NA	0.1 U
Benzo(a)pyrene	0.014					0.018			0.018	0.53			NA NA	NA NA	NA .	NA NA	ŇA	NA.	
Benzo(b)fluoranthene	6.16 (d)		-	-W		0.018		<u>.</u>	0.018	 5			NA	NA	NA	NA NA	NA	NA	0.1 U
Scnzo(g,h,i)perylene Benzo(k)fluoranthene			-			0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U 0.1 U
Chrysene					-0.18	0.018			0.018	ar alla ar	4. E		NA.	NA NA	NA-	CARROLL COMMANDE COMMAND	NA.	NA NA	01 U
Dibenzofuran	3.7		-						the contract of the contract of the				NA NA	NA	NA	NA	NA	NA	0.1 U
Eluorantherie Fluorene	6.16 3.9			3980 (a)		5300			140 5300			***	NA NA	NA , NA	NA NA	NA NA	NA NA	NA NA	0.1 U 0.1 U
Indeno(1,2,3-cd)pyrene	3.9					0.018			0.018				NA NA	NA NA	NA NA	NA NA	NA NA	MA.	0.10
Naphthalene	620		284,000	2300 (a)	620 (a)					680			NA NA	NA	NA	NA	NA	NA	0.1 U
Phonanthrene	620 (b)		284000 (b)			4000			4000				NA NA	NA NA	NA NA	NA NA	NA NA	NA I	0.1 U
Pyrene				-	-	4000			4000	-			INA	INA	INM	INO.	INA	NA.	0.1 0
VOLATILES (µg/L)											ĺ								
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)		200000 (e)			_				1300			NA	NA	NA	NA	NA	NA	1 U
1.3,5-Trimethylbenzene			200000 (e)							1400			NA.	NA NA	NA NA	NA	NA NA	NA NA	10
4-Isopropyltoluene	9.8 (1)		104000 (f)						-	**			NA	NA	NA	NA	NA	NA	1 U
Senzene Ethylbenzene	13Q 7.3		200,000 200000 (e)	5300 (a) 32000 (a)		51 (g) 2100			<b>51</b> 29,000	1700 110.000	13,000		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1 U
Etnylbenzene Isopropylbenzene			200000 (e) 200000 (e)	ა2000 (a)		2100			29,000	110,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	10
m,p-Xylene	13 (h)	ALEX TOTAL SECTION OF	8000 (h)	Mary 1970 ABOVE 176					Mary de la maria della maria d	22000 (i)			NA NA	NA	NA	NA	NA	NA	1 U
Methyldert-Bulyl Ether							1.0	y g area		31,000	550,000		. NA	NA.	NA	NA NA	NA .	NA NA	1,5
n-Butylbenzene n-Propylbenzene	130 (e) 130 (e)		200000 (e) 200000 (e)										NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1 U
Naphthalene	620		284,000	2300 (a)	620 (a)			-		680			NA NA	NA	NA NA	NA	NA	NA NA	5 U
o-Xylene	1.8		8000 (h)							22000 (i)	1.00		NA	NA .	NA.	NA =	L NA		1.⊍
sec-Butylbenzene	130 (e)		200000 (e)								70 W T-		NA NA	NA NA	NA NA	NA NA	NA NA	NA 618	1 U
terit-Butylbenzene Toluene	130 (e) 9.8		209000 (e) 104,000	17500 (a)		15,000			200,000	78,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1 U
·			,			,			,	,	I	I							

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Landau Associates

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													MTF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRI	TERIA											
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wat	er Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based C			1						
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	LW17D 0408044-08 8/6/2004	LW17D 0411051-08 11/9/2004	LW18D FY82F 10/23/2003	LW18D 0402105-07 2/20/2004	LW18D 0408044-04 8/6/2004	LW18D 0411051-05 11/9/2004	LW20D FZ04N 10/28/2003
HYDROCARBONS (mg/L)	7 iquatio	Birdo	ALL THE LOCAL CONTRACTOR OF TH	7,000	GINGING		ome (risoto)	900 (01,101,10)										,	
NWTPH-HCID									İ										
Gasoline										12			NA.	NA	NA	NA	NA	NA	NA
Diesel													N/A		NA.	NA.	. V NA	NA NA	NA.
AND THE PROPERTY OF THE PROPER			HERE TO SHEET AND STREET		datives, very	Man Malar State State State State	THE RESIDENCE THE PERSON	and the state of t	distriction to the first reco		Control of the State of the State of St		() leaf termine Applicable out-	- Name and Address of the Association		A DOMESTIC OF THE LINE	S MANY CONTROL	ACT NO. 1000 1 1000 1000 1000 1000 1000 1000	Charles State Continues in
NWTPH-Dx													l						
TPH-Diesel Range											r a we en	 61787 <b>2</b>	NA NA	2.74 0.489 U	NA NA	NA NA	NA NA	2.32 0.491 U	0.4
TPH-Motor Oil Range		<b>第5文集大型</b> 主义								**************************************			NA.	U 489 U	NA NA	NA	NA.	D.491 U	0.5 U
NWTPH-G																			
TPH-Gasoline Range										12	***		NA	3.83	NA	NA	NA	1.79	0.25 U
PRIORITY POLLUTANT								ļ	1										
METALS (mg/L)									l										
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	NA	NA	NA	NA NA	NA	NA	0.021
Chromium (6610)	0.011 (k)		25 (k)	0 29 (1)	0.065 (i)	CONTRACTOR SERVICES LEGISLANDS	0.57	0.074				0.005	NA NA	NA -	- was years a supplication	Salar American Control Control	NA.	DECLINATION NAMED IN CORPORATION OF THE PERSON NAME	0.005 U
Copper (6010)	0.009	341 - 28	53 328	0.05 (i) 0:043 (i)	0.011 (l)		0.013 0.065	0.009 0.0025 (*)				0.004 0.02	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.004 0.001 U
Lead (7421) Nickel (6010)	0.052		38		0.0007-(f)(* 0.052 (f)	4.6	0.47	0.0525 (*)	4.6			0.02	NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.001 U 0.01 U
Zinc (6010)	0.052	562 105	1230	0.33 (l) <b>0.1 (l)</b>	0.170	4.6 26	0.47	0.052	26			0.015	NA NA	NA NA	NA.	NA NA	NA NA		0.015
2116 (6016)	0.120	100	1230	0.1 (1)	0.1 (1)	## #21 6490 EE 19		Maria Maria	Company of the second	- 10/201 III 107-777-17		Word	THE RESIDENCE OF THE PARTY OF T		and the second second			EL THE SHADOW	A THE PARTY OF THE
BETX (µg/L)																			
EPA Method SW8021B												ĺ							
Benzene	130	**	200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7,3		200000 (f)	32000 (a)		2100			29.000	110,000			NA	NA	NA.	NA NA	NA-	- NA	NA
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000	***	w	NA	NA	NA	NA	NA	NA	NA
Xylenes, Total	13 (b)		8000 (市)							22,000			NA.	- NA	NA.	NA-	NA.	- NA -	NA.
DIOXIN/FURANS (ng/L) EPA Method SW8290																			
Total TEQ						5.1E-06				-		-07	NA	NA	NA	NA	NA	NA	NA

**2** Page 11 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRI	TERIA										
	Oregon	SLVs - Surfa	ace Water	Oregon A	mbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration							
Sample Identification: Laboratory Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh		Construction	Volatilization	Site-	LW20D	LW20D	LW20D	LW20D	LW22D	LW22D
Laboratory identification: Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0402115-03 2/24/2004	0406050-10 6/8/2004	0408056-10 8/9/2004	0411059-03 11/10/2004	FZ04A 10/27/2003	0402115-10 2/24/2004
	7 140-410			1	011101110		T This (Hosto)	000 (011101110)	1	Tropico	Оббаранола	Duonground	2202004	GGE004	0/3/2004	1171032004	10/27/2000	2/24/2004
SEMIVOLATILES (µg/L) EPA Method SW8270																		
2,4-Dimethylphenol	42			2120 (a)		850			850	_			3.07 U	3.12 U	3.19 U	2.85 U	4.2 U	3.08 U
2-Methylnaphthalene	620 (b)		284000 (b)									Fig. 15.48	1.02 U	1.04 U	1.06 U		140	1.03 U
Acenaphthene	520			1700 (a)	520 (a)	990	**	-	990	-			1.02 U	1.04 U	1.06 U	0.95 U	1.4 U	1.03 U
bis(2-Ethylhexyl)phthalate	3.0	8000	7,3000		14 A	2,2		**	2.2			Eastern Co.	1.02 U	1.04 U	1.86	0.95 U	- 1.4 U	1.03 U
Carbazole													1.02 U	1.04 U	1.06 U	0.95 U	1.4 U	1.03 U
Dibenzofuran Di-n-Butylphthalate	3.7 35	800	2,200,000			4500			4500				1.02 U 1.02 U	1.04 U 1.04 U	1.06 U 1.06 U	0.95 U 0.95 U	1.4 U	1.03 ∪
Fluorene	3.9	25, 10				5300			5300 5300	le aire			1.02 U		1.06 U	and the second second second	1.4 U 1,4 U	1.03 U 1.03 U
Naphthalene	620	CWATHERN SERVES	284,000	2300 (a)	620 (a)					680			1.02 U	1,04 U	1.06 U	0.95 U	1.4 U	1.03 U
Pentachiorophenol	- montempring 800000500		1800	19 (c)	15 (c)	3.0	19	115	3.0			Established	5.12 U	519 U	531 ⊍	4.75 ⊍		5 13 Ü
Phenanthrene	6.3		284000 (b)	-						<u> </u>			1.02 U	1.04 U	1.06 U	0.95 U	1.4 U	1.03 U
Phenol	110			10200 (a)	2560 (a)	1,700,000			7		4		2.05 U	208 U	2.13 U	19 U	4.1	2.05 U
EPA Method SW8270SIM												1						
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	NA	NA	NA	NA	NA
Datie ( =h )																		
PAHs (µg/L) EPA Method SW8270 - SIM																		
2-Methylnaphthalene	620		284.000					75					NA.	NA	NA	NA	0.14 U	NA
Acenaphthene	A Company of Company of the Company			1700(a)	520 (a)	990			990				0.0557 U	0.05 U	0.11	0.0476 U		0.0523 U
Acenaphthylene	620 (b)		284,000	-	**		-						0.0557 U	0.05 U	0.0502 U	0.0476 U	0.14 U	0.0523 U
Anthracene						40,000			40,000	4 2			0.0557 U		0.0502 U	0.0476 U		0.0623 U
Benzo(a)anthracene Benzo(a)pyrene	0.027			 G-0000000000000000000000000000000000		0.018 0.018	a. A. militarija (jama)		0.018 0.018	9.1 0.58			0.0557 U 0.0557 U	0.05 U 0.05 U	0.0502 U 0.0502 U	NA 0.0476 U	0.14 U 0.14 U	0.0523 U
Benzo(b)fluoranthene	6.16 (d)					0.018	=		0.018				0.0557 U	0.05 U	0.0502 U	0.0476 U	0.14 U	0.0523 U 0.0523 U
Benzo(g,h,i)perylene		Artes.		医闭锁管							Sex	44	0.0557 U	0.05 U	0.0502 U	0.0476 U	0.14.0	0.0523 U
Benzo(k)fluoranthene						0.018	-	-	0.018				0.0557 U	0.05 U	0.0502 U	0.0476 U	0.14 U	0.0523 U
Chrysene					sk er .	0.018			0.018	B. R. Service			0.0557 U		0.0502 U			0.0523 U
Dibenzofuran Eluoranthene	3.7 6.16				CONTRACTOR STATE	140			140				NA 0.0557 U	NA	NA 0.0502 U	NA	0.14 U	NA
Fluorantheria Fluorene	3.9		-	3800 (a)		5300			5300				0.078	0:05-U 0:17	0.0602	0.0476 U 0.0476 U	0.14 U 0.35	0.0523 U 0.0523 U
Indeno(1,2;0 cd)pyrene				**************************************		0.018			0.018				0.0557-U	0.05 U	0.0502 U	0.0476 U	0.35 0.14 U	0.0523 U
Naphthalene	620		284,000	2300 (a)	620 (a)		EVEL SEL TON TON			680			0.0557 U	0.06	0.1	0.0476 U	0.14 U	0.0523 U
Phenanthrene	620 (b)		284000 (6)	<b>医腰部区</b>		<b>200</b>							0.0557 U	0.05.0	0.0502 U	0.0476 U	014 U	0.0529 U
Pyrene				-		4000	-		4000	~			0.0557 U	0.05 U	0.0502 U	0.0476 U	0.14 U	0.0523 U
VOLATILES (µg/L)																		
EPA Method SW8260							i				l							
1,2,4-Trimethylbenzene	130(e)		200000 (e)					-		1300	*** **********************************	92 - 5895 (1856 - 1855 -	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5 Trimethylbenzene	130 (e) 9.8 (f)		200000 (e) 104000 (f)							1400			1 U_ 1 U	1 U	1 U	10	1.0	10
4-Isopropyltoluene Benzene	9.8 (T) 130	-	104000 (f) 200,000	_5300 (a)		51 (g)			51	1700	13,000		0.4-0	1 U 0.8 U	1 U 0.3 U	1 U 0.3 U	1 U 2.9	1 U
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000		ogs William	1 U	0.5 U	1 U	1 U	2.9 1 U	1 U
Isopropybenzene													10	1 Ü	10	10	14	İÜ
m,p-Xylene	13 (h)		8000 (h)			-		Man Seas Man (Eller See ) de	STUDENT SERVICE STATE OF THE SERVICE STATE STATE OF THE SERVICE STATE ST	22000 (i)	I		2 U	2 U	2 U	2 U	1.6	2 U
Metnyl fert-Butyl Ether	400 ( )		200000							31,000	550,000		Tu.	principal and experience of the re-		1-U.2	1.9.M	
n-Butylbenzene	130 (e) =130 (e)		200000 (e) 200000 (e)		-								1 U 4 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene Naphthalene	620	- 10 m	284.000	2300 (a)	620 (a)					680			1 U	1 U	1.U 1.U	1 U	12 5 U	1 U
o-Xylene	1.8	and the Copylet of the Co	8000 (h)		110 (11)	148675				22000 (i)			ÍŬ		90		10	
sec-Butylbenzene	130 (e)	-	200000 (e)				-						1 U	1.0	1 U	1 U	1.5	1 U
tert-Butylpenzene	130 (e)		200000 (e)			- A-M-1						المستقلة	,1.U.	1 U	-1 U		1,0	10
Toluene	9.8		104,000	17500 (a)	-	15,000			200,000	78,000			1 U	1 U	1 U	1 U	1.6	1 U

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													MTF	MTF	MTF	MTF 7	MIR : "	OF MIFE
1							SCREENING CRI	TERIA										
	Oregon :	SLVs - Surfa	ce Water	Oregon A	mbient Water	r Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration		1					
Sample Identification:				l		Fish				Construction	Volatilization	Site-	LW20D	LW20D	LW20D	LW20D	LW22D	LW22D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0402115-03 2/24/2004	0406050-10 6/8/2004	0408056-10 8/9/2004	0411059-03 11/10/2004	FZ04A 10/27/2003	0402115-10 2/24/2004
HYDROCARBONS (mg/L)	Aquatic	Dilda	WEITHINGS	Acute	Onlone	Only	ONO (Acate)	000 (011101110)	Oilly	YVOIRE	Оссиралогіа	Duckground	2242004	0.0/2004	8/8/2004	11/10/2004	10/21/2000	224/2004
` • '													1					
NWTPH-HCID Gasoline										4.0			l NA			N/ A		***
										12			NA NA	NA NA	NA NA	NA NA -	NA NA	NA NA
	No. 100 Year No.	THE TON THE CONTROL		20100100000	Not had not made			は 製作 は 日本 に 一部 は 一部 は 一部 に 一日								PERSONAL PROPERTY.		
NWTPH-Dx																		
TPH-Diesel Range							 						0.369	0.573	0.737	0.552	2	0.429
TPH-Molor Oil Range	**		-	0,000	***								0.492 U	0.504 U	0.506.1	0.665	0.5 U	0 497 U
NWTPH-G																		
TPH-Gasoline Range				-				-		12			0.100 U	0.100 U	0.229	0.100 U	0.54	0.100 U
PRIORITY POLLUTANT													]					
METALS (mg/L)								1		1			1					
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0287	0.0268	0.0286	0.0297	0.023	0.0386
Chromium (6010)	0.011 (k)		25 (k) -	0.29(1)	0.065(1)	3433	0.57	C:074				-0.005	0.0206	0.0199	0.0271	0.022	0,15	0.0195
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009		and other contract of the		0.004	0.01 U	0.01 U	0.0957	0.0113	0.199	0.0114
Lead (7421)	0.0025 (*)	28	323	0.043 (I)	0.0007 (1)(*)	· 6 *	0.065	0 0025 (*)				0.02	0.00196	0.00139	0.00305	0.00188	0.056	0.00973
Nickel (6010) Zinc (6010)	0.052	562 105	38 1230	0.33 (1)	0.052 (l) <b>0.1 (l)</b>	4.6 26	0.47 0.12	0.052	4.6 26			0.01 0.015	0.005 U 0.0113	0.005 U 0.0167		0.005 U 0.0238	0.14	0.005 U 0.0361
Zine (b010)	0.120	305	1230	0.1 (1)	V.I.(I)	26.	PAZZ	9.14	20			U.D.O	0.0113	0.0101	u.uo.ce	U.UZ38	0.4	0.0361
BETX (μg/L)																		
EPA Method SW8021B										ı								
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA NA	NA	NA	NA	NA	NA
Ethylbenzene	7,3		200000 (1)	32000 (a)	39.5	2100			29,000	110,000			NA	NA.	NA=	NA-		NA E
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000			NA	NA	NA	NA	NA NA	NA
Xylenes, Total	13 (h)		8000 (h)			* *				22,000		A.Tar <del>a</del> lian	NA_	NA.	NA	NA	NA.	NA.
DIOXIN/FURANS (ng/L)						l				1								
EPA Method SW8290								1										
Total TEQ						5.1E-06							NA	NA	NA	NA	NA	NA

Page 13 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRIT		• • • • • • • • • • • • • • • • • • • •						<del></del>			
Sample Identification:	Oregon	SLVs - Surfa	ice Water	Oregon A	mbient Wate	r Quality Criteria Fish	National Rec	ommended Water (	Quality Criteria	Risk-Based (	Concentration Volatilization	Site-	LW22D	LW22D	LW22D	LW23D	LW23D	LW23D
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0406040-03	0408056-03	0411059-04	FZ04B	0402115-11	0406040-04
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/7/2004	8/9/2004	11/10/2004	10/27/2003	2/24/2004	6/7/2004
SEMIVOLATILES (µg/L)																		
EPA Method SW8270																		
2,4-Dimethylphenol 2 Methylnachthalene	42 620 (b)		284000 (b)	2120 (a)		850	200.000		850				2.85 U 0.951 U	3.03 U		1 l 6.8		2.9 U 0.968 U
Acenaphthene	520	**	201000 (0)	1700 (a)	520 (a)	990			990				0.951 U	1.01 U		1 L	th whellow provided and for count? I have up that and	0.968 U
bis(2-Ethylhexyl)phthalate	3.0	8000	73000			2.2			2.2				0.951 U	1.01 U				
Carbazole									*-				0.951 U	1.01 U		1 L		0.968 U
Dipenzoturan Di-n-Butylphthalate	3.7 35	800	2.200.000			4500		-	4500	-			0.951 U 0.951 U	1.01 U		1 L 1 L		0.968 U 0.968 U
Fluorene	3.9					5300	967 <b></b>		5300			7 . D. M. J.	0.951 U	1.01 U		21		0.968 U
Naphthalene	620		284,000	2300 (a)	620 (a)	**		-		680			0.951 U	1.01 U		1 (		0.968 U
Pentachlorophenol	15		1800	19 (c)	15 (c)	3:0	19	15	3.0				4.76 Ū	5.06 U		- 51		4.84 U
Phenanthrene Phenoi	6.3 = 110 =		284000 (b)	10200-(a)	2560 (a)	1,700,000				BEFEST			0.951 U	1.01 U 2.02 U		1 L		0.968 U 1.94 U
						77770000			en en en en en en en en en en en en en e	Anne Turk) postania (St.	NAME OF TAXABLE PARTY.		,,,,,,,			ar-1981 - 411 (1985 - 1986)	THE PERSON NAMED IN	The Advantage of the August of
EPA Method SW8270SIM																		
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA	NA	NA	NA	NA	NA
PAHs (µg/L)							Ì											
EPA Method SW8270 - SIM																		
2-Methylnaphthalene Acenaphthene	620 520 -	e e e e e e e e e e e e e e e e e e e	284,000 	_1700 (a)	520 (a)	990			990				NA 0.0482 U	NA = 0.052 U	NA 0.052 U	0.1 U 0.61	NA 0.16	NA 0.429
Acenaphthylene	620 (b)		284,000	1700 (a)	DZU (8)	-			-			***	0.0482 U	0.052 U		0.1 U	A TO THE PROPERTY OF PERSONS AND ADMINISTRATION OF PERSONS AND ADM	0.429
Anthracene	13			(B-4H-3)	8.0	40,000			40,000			51 (140)	0.0482 U	0.052 Ü		0.11	0.05 U	0:0488 U
Benzo(a)anthracene	0.027					0.018			0.018	9.1		eronali (antovale)	0.0482 U	0.052 U	NA	0.16	0.05 U	0.0488 U
Benzo(a)pyrene Benzo(b)fluoranthene	0.014 6.16 (d)		-			0:C18 0:018	-		0.018	0.53		er.	0.0482 U 0.0482 U	0.052 U 0.052 U	0.052 U 0.052 U	0:33	0.05 U 0.05 U	0.0488 U 0.0488 U
Benzo(g.h.)perylene	0.10 (u)					0.010			0.010				0.0482 U	0.052 U		0.16	0.05 U	0.0488 U
Benzo(k)fluoranthene						0.018	-		0.018				0.0482 U	0.052 U	0.052 U	0.15	0.05 U	0.0488 U
Chrysene						0.018			0.018				0.0482 U			0.21	0.05 U	0.0488 Ü
Dibenzofuran Fluoranthene	3.7 6.16			3980 (a)		 			140				NA 0.0482 U	NA 0.052-U	NA 0.0624	0.1 U <b>0.36</b>	NA 0.05:U	NA 0.0488 U
Fluorene	3.9			- ANNOTAL		5300		MCCHE MALE MCHILLING	5300		123-150-1713-228703		0.0482 U	0.166	0.052 U	0.31	0.06	0.0585
Indeno(1,2,3-od)pyrene						0.018			0.018		Part I		0.0482 U	0,052 U	0.052 U	0.12	0.05 ป	
Naphthalene	620		284,000	2300 (a)	620 (a)	 				680			0.106 0.0482 U	0.052 ∪	0.052 U	0.1 U		0.517
Phenanthrene Pyrene	620 (b)		- 284090 (b)			4000			4000				0.0482 U	0.052 U 0.052 U	0.052 U 0.0832	0,2 0,44	0.05 U 0.05 U	0.0585 0.0585
· ·													5.0.02	0,102	7,2002	••••	0.00	0.0000
VOLATILES (µg/L)																		
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)	_	200000 (e)					_		1300			1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	130 (e)		200000 (e)										10	10		iŭ		
4-isopropyltoluene	9.8 (f)		104000 (f)		**	-						<u> </u>	1 U	1 U		1 U	1 U	1 U
Benzene	130		200,000	5300 (a)	- "	51 (g)	10.04	idahé a a	51	1700	13,000.		0.3 U	0.3 U		40	22.9	132
Ethylbenzene Isopropylbenzene	7.3 130		200000 (e) 200000 (e)	32000 (a)	-	2100			29,000	110,000			1 U	1 U	1 U	1 U ■ 16		1 U 13,7
m,p-Xylene	13 (h)		8000 (h)	-			**	W-	4-4	22000 (i)			2 U	2 ∪	2 U	1.2	2 U	2 U
Methyl tert-Butyl Ether										31,000	550,000	4	1.0	1.0	to in small included, with an extraction	CERC HOLD THE TREE OF		51.2
n-Butylbenzene	130 (e)		200000 (e)			4.20 % 927		-					1 U	1 U	1 U	1.6	1 U	1.4
n-Propylbenzene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)					680			5.59 1 U	1 U	1 U =	<b>8.6</b> 5 U	<b>6.71</b> 1 U	6.9° iii. 1 U
o-Xylene	1.8		264,000 8000 (h)	2300 (a)	620 (a)					22000 (i)			a de la decembra de la composição de la composição de la composição de la composição de la composição de la co	Turning believed the of Whiteless Com-			10	10
sec-Butylbenzene	130 (e)		200000 (e)					-					1.26	1 U	1 U	3.3	1.12	2.86
tert-Butylbenzene	130 (e)		200000 (e)		5.*					70.00				1.0		Į.U	Targett and the same of the sa	. با 10
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000		***	1 U	1 U	1 U	1.2	1 U	1 U

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													MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRI	TERIA										
	Oregon	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based (	Concentration		1					
Sample Identification:						Fish				Construction	Volatilization	Site-	LW22D	LW22D	LW22D	LW23D	LW23D	LW23D
Laboratory Identification: Date Collected:				Fresh	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker		Specific	0406040-03	0408056-03	0411059-04	FZ04B	0402115-11	0406040-04
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Uniy	worker	Occupational	Background	6/7/2004	8/9/2004	11/10/2004	10/27/2003	2/24/2004	6/7/2004
HYDROCARBONS (mg/L)								İ	İ	1		1						
NWTPH-HCID																		
Gasoline										12			NA.	NA	NA	NA	NA	NA
Piesel							-						NA NA	NA.	NA.	NA NA	NA:	NA NA
NWTPH-Dx												ļ						
TPH-Diesel Range													3.43	1.75	1.61	2.9	1.53	4.44
TPH-Motor Oll-Range													0.499 U	0.498 L	1:29	0.5 U	0.648	0.527 U
NWTPH-G									1			1						
TPH-Gasoline Range					-			-		12	***		0.239	0.100 U	0.100 U	0.88	0.668	0.732
PRIORITY POLLUTANT																		
METALS (mg/L)								1										
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0256	0.00774	0.0417	0.021	0.0421	0.0444
Chromium (6010)	0.011 (k)		25 (k)	0.29 (I)	0.065 (I)	3433	0.57	0.074				0.005	0.0235	0.0194	0.005 U		0.0226	0.0248
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0.013	0.009				0.004	0.01 U	0.01 U		0.201	0.0197	0.01 U
Lead (7421)	0.0025 (*)	28-	323		0.0007 (l)(°)		- 0.065-	0.0025 (*)			94.	0.02	0.00374	0.00121	0,0028	0,068	0.00854	0,00465
Nickel (6010)	0.052	562	38	0.33 (f)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.005 U		0.11	0.005 U	0.005 U
Zinc (6010)	0:120	105	1290	0.1 (i)	0.1 (l)	26=	0.12	0.12	26	-		0.015	0.0175	0.0123	0.0176	0.348	0.0333	0.024
BETX (μg/L)																		
EPA Method SW8021B						ĺ												
Benzene	130	n . NEW AND COMP. COM	200000	5300 (a)	COLUMN TO SERVICE AND AND AND AND AND AND AND AND AND AND	51 (g)		TO A CONTRACTOR OF THE REAL PROPERTY.	51	1700	13000		NA NA	NA NA	NA NA	NA	NA	NA
Ethylbenzene	7,3		200000 (f)	32000 (a)		2100			29,000	110,000			NA	NA	NA NA	NA NA	NA NA	NA .
Toluene	9.8	MATERIAL PROPERTY.	104000	17500 (a)		15,000			200,000	78,000			NA	NA	NA.	NA	NA	NA
Xylenes Total	13 (h)		8000 (h)						Taria Kidi B	22 000		****	NA.	NA_	NA NA	NA.	NA -	NA
DIOXIN/FURANS (ng/L)																		
EPA Method SW8290						i												
Total TEQ						5.1E-06							NA	NA	NA	NA	NA	NA

TABLE D-2 Page 15 of 40

### SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRIT												
Sample Identification:	Orego	n SLVs - Surf	ace Water	Oregon A	mbient Wate	r Quality Criteria Fish	National Rec	ommended Water	Quality Criteria		Concentration	Site-	LW23D	LIMBOD	LW24D	114/04/0	1,440,40	1111010	
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Specific	0408056-04	LW23D 0411065-01	FZ04U	LW24D 0402115-07	LW24D 0406040-07	LW24D 0408056-06	LW24D 0411065-02
Date Collected:		Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/9/2004	11/11/2004	10/28/2003	2/24/2004	6/7/2004	8/9/2004	11/11/2004
SEMIVOLATILES (µg/L)																			
EPA Method SW8270												1							
2,4-Dimethylphenol	42			2120 (a)		850			850				3.14 U			3.22 U	2.85 U		
2 Methylnaphthalene Acenaphthene	520 (b) 520	•	284000 (b)	1700 (a)	520 (a)	990			990	84661			1.05 U 1.05 U	1.02 U 1.02 U		1,07 U	0.951 U		Last Millian Comment amount or signed in
bis(2-Ethylnexyl)phthalate	3.0	- 8000 °	78000	1700 (a)	520 (a)	2.2	To be the		22				1.05 U		1 U	1.37 1.07 U	1.27	1.65 1.91	1.43
Carbazole		ennerreit feltrur			••						STREET, THE SECOND	And the Control of th	1.05 U	1.02 U		1.07 U	0.951 U		
Dibenzofutan	3.7												1.05 Ú			1.07 U	0 951 U		
Di-n-Butylphthalate	35	800	2,200,000			4500 5300	-	-	4500				1.05 U			1.07 U	0.951 U		
Fluorene Naphthalene	3.9 620		284.000	2300 (a)	620 (a)	5300			5300	680		asy	1.05 U	1.02 U 1.02 U	2 U 1 U	<b>3.55</b> 1.07 ⊔	<b>3,06</b> 0.951 U	4.04 1.04 U	<b>3.47</b> 0.955 U
Pentachiorophenol	15		1800	19 (g)	15 (c)	3.0	19	15	3.0	080			5 24 U	5.12 U			4.75 U		
Phenanthrene	6.3		284000 (b)				-				***		1.05 U	1.02 U	1 U	2.06	2.13	2.58	2.76
Phenol	110			10200 (a)	2560 (a)	1,700,000	<b>9</b> 1.1						2.09 ∪	2 05 Ù	3 U	2.14 U	19 U	208 U	1.01 U
EPA Method SW8270SIM																			
Pentachiorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA.	NA	NA	NA	NA	NA	NA
				, ,			İ												
PAHs (µg/L) EPA Method SW8270 - SIM																			
2-Methylnaphthalene	620		284,000								1		NA.	NA	0.1 U	NA	NA	NA	NA
Acenaphilhene	520		204,000	1700 (a)	520 (a)	990			990				0.86	0.698	0.91	1.56	1.21	139	1,45
Acenaphthylene	620 (b)		284,000										0.123	0.115	0.1 U	0.375	0.303	0.517	0.357
Anthracene	13				+			- 1 × 1 × 1	40,000		***		0.0512 U	0.0478 U	0.43	-0.135	0.162	0.146	0.154:
Benzo(a)anthracene Benzo(a)pyrene	0.027					0.018 0.018			0.018	9.1 0.53			0.0512 U 0.0512 U	NA 0.0450 LL	0.4	0.052 U 0.052 U	0.0607 0.0508 U	0.0487 U 0.0487 U	
Benzo(b)fluoranthene	6.16 (d)					0.018	-	-	0.018				0.0512 U	0.0478 U 0.0478 U	0.18	0.052 U	0.0506 U	0.0487 U 0.0487 U	0.0482 U 0.0482 U
Berizo(gih.i)perylene													0.0512 U		0.13	= 0.052 U	0.0506 U	0.0487 U	
Benzo(k)fluoranthene	-			-		0.018			0.018		***		0.0512 U	0.0478 U	0.27	0.052 U	0.0506 U	0.0487 U	0.0482 U
Chrysene						0.018	4 30 KG - 4	an all	0.018			10	0.0512 U	0.0478 U	0.4	0.052 U	0.0506 U	0.0487 U	The second secon
Dibenzofuran Fluoranthene	3.7 6.16		_	-3980 (a)		140			140				NA 0.0716	NA 0.0669	0.1 U 0.78	NA 0.177	NA 0.212	NA 0.205	NA 0.154
Fluorene	3.9					5300			5300	*-		25 - 1645 - 1595 - ABRIC - 1745 - 17	0.246	0.277	0.7	3.96	2.81	2.65	3.73
indeno(1,2,3 cd)pyrene			10.00			0.018			0.018				0,0512 ⊎	0 0478 U	0.12	0 052 U	0.0505 U	0.0487 U	
Naphthalene Phenanthrene	620		284,000	2300 (a)	620 (a)	TANCOTORINA COMPETA - SETTINA	White the second	-		680			0.409	0.526	0.1 U	0.749	0.87	0.409	0.829
Phenanthrene Pyrene	620 (b)		284000 (b)			4000			4000				0,102 0.0716	0.124 0.0765	1.2 0.94	1.86 0.166	1.63 0.263	1.72 0.127	1.61
rytene				-	-	4000		-	4000				0.0710	0.0765	0.94	0.100	0.203	0.127	0.145
VOLATILES (μg/L)								İ				ļ							
EPA Method SW8260	400(-)		000000 (-)							4000		İ	4.11						
1,2,4-Trimethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)				-			1300 1400		 [20]	1 U	1 U	1 U 1 U	1 U 1 U	1 U	1 U	1 U
4-Isopropyltoluene	9.8 (f)		104000 (f)	-									1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	130		200,000	5300 (a)	1 22.1	51 (g)	era era i		51		13,000		26.1	12,1	1 U	0.4 U			
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100		-	29,000	110,000	HALIDED BEET CHOSEN IN		1 U	1 U	1 U	1 U	1 U	1 U	1 U
#soprapylbenzene m.p-Xylene	130 13 (h)		200000 (e) 8000 (h)							22000 (i)		e alcarrat	11.5 2 U	14.5 2 U	2.2 1 U	7,97 2 U	8:96	10.4	10.6
Methyl test-Bulyl Ether	13 (FI)	7.0	8000 (n)						-	22000 (i) 31,000	550,000		3.17	7.93	1 U	2 U	2 U	2 U	2 U
n-Butylbenzene	130 (e)	ET: BOK-188Yaland	200000 (e)		-								1 U	1.45	1 U	2.85	3.51	2.63	3.3
n-Propylbenzene			200000 (e)						(10 to 10 to	7.			5,51	4.79	1.0	12.8	11.5	13	10,3
Naphthalene	620		284,000	2300 (a)	620 (a)				61 76 27	680			1 U	1 U	5 U	1 U	1 U	1 U	1 U
6-Xylene sec-Butylbenzene	1.8 130 (e)		8000 (n) 200000 (e)							22000 (i)			1.U 1.6	1.22 2.08	1 U	4.81	1 D 4.84	1 U 4.22	1.31 4.08
tert-Buty/benzene	130 (e)		200000 (e)										1.0	2.00	1.3 1 U	4,01 1 U	4.04 1 U	4.22 1 U	4.08
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U
			ı			ı	ı	!	1		l l	- 1							

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### Page 16 of 40

													MTF	MTF	MTF	MTF	MTF	MTF	MTE
							SCREENING CRIT	ERIA											
	Oregon	SLVs - Surfa	ice Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration		1						
Sample Identification:						Fish				Construction	Volatilization	Site-	LW23D	LW23D	LW24D	LW24D	LW24D	LW24D	LW24D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammais	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0408056-04 8/9/2004	0411065-01 11/11/2004	FZ04U 10/28/2003	0402115-07 2/24/2004	0406040-07 6/7/2004	0408056-06 8/9/2004	0411065-02 11/11/2004
	Aqualic	Dirus	Iviammais	AGULE	CHIOIRC	Only	ONIC (Acute)	CCC (Cinoric)	City	Vydiker	Оссыранона	Background	6/9/2004	11/11/2004	10/20/2003	2/24/2004	0///2004	0/9/2004	11/11/2004
HYDROCARBONS (mg/L)																			
NWTPH-HCID																			
Gasoline	l						-			12			NA NA	NA	NA	NA NA	NA NA	NA.	NA
Diesei	of Design											100	NA NA	NA.	NA NA	NA .	NA NA	NA.	NA
NWTPH-Dx										1									
TPH-Diesel Range		_									***		3.21	2.94	2.5	5.43	6.84	6.57	3.87
TPH-Motor Oil Range													0.5 U	1,2	0.5 U	1.15	0.541 U	0.576 L	1,24
NWTPH-G																			
TPH-Gasoline Range										12			0.562	1,23	0.92	1.46	1.23	0.948	1.64
g-																			
PRIORITY POLLUTANT													i						
METALS (mg/L)	Į.			ĺ					İ										
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)		dan up Analik Prin Statem (Statement	1.5	0.0435	0.0574	0.009	0.0664	0.0576	0.043	0.0525
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)		3433	0.57	0.074		1	4	0.005	0.0224	0.037	0.125	0.0423	0.0421	0.0279	0.0422
Copper (6010) Lead (7421)	0.009	341 -28	53 323	0.05 (l) = 0.043 (l)	0.011 (I)	-	0.013	0.009 0.0025 (*)				0.004 <b>0.02</b>	0.0372	0.0387	0.163	0.0474	0.0256	0.0125	0.0424
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (I)	4.6	0.065	0.0025 ( )	4.6		28-24 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 - 18-2 	0.02	0.005 U	0.005 U	0.058	0.0096	0.0069	0.00423	0.0237
Zine (6010)	0.052	105	1230	0:1(1)	0.1 (1)	26	0.47	0.12	26			0.015	0.0431	0.0754	0.327	0.102	0.0003	0.0905	0.0237
2.00.100.00.	The Street of th		1200	V.115	0.117	- 100 Carlo 100	60 co sw/m-co-	Con the Mil Ton these			ARTHUR STATE OF THE STATE OF		The second			9 <del>1</del>			the same of the sa
BETX (µg/L)							j			1			ĺ						
EPA Method SW8021B																			
Benzene	130	n menden ere e	200000	5300 (a)		51 (g)		to allowed the ball of the Theory	51	1700	13000		NA	NA	NA	NA	NA NA	NA NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000	Canton of anyon		NA.	NA NA	NA I	ACCURATION AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON ADDRESS OF THE PERSON ADDRESS OF THE PERS	NA NA	NA.	NA NA
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000			NA	NA NA	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		8000 (h)							22,000			NA NA	NA_	NA	NA_	NA=	. NA	, NA
DIOXIN/FURANS (ng/L)				l						1									
EPA Method SW8290																			
Total TEQ				-		5.1E-06					***		NA.	NA	NA	NA	NA	NA	NA
'				•						•			•						

TABLE D-2
Page 17 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF:	MTE	MTF	MTF
							SCREENING CRI												
Committee the state of the stat	Oregon	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (	Concentration Volatilization	Site-	LW25D	LW25D	LW25D	LW25D	LW25D	LW26D	LW26D
Sample Identification Laboratory Identification				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	and Excavation		Specific	FZ04V	0402115-08	0406040-08	0408056-07	0411065-03	FZ04T	0402115-05
Date Collected	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/28/2003	2/24/2004	6/7/2004	8/9/2004	11/11/2004	10/28/2003	2/24/2004
SEMIVOLATILES (µg/L)									1				l						
EPA Method SW8270																			
2,4-Dimethylphenol 2-Methylnaphthalene	42 620 (b)		284000 (b)	2120 (a)		850	-		850				1.2 U	3.2 U 1.07 U	3.06 U 1.02 U	2.99 L 0.996 L		1.1 U	3,33 U
Acenaphthene	520 (1)	-	204000 (0)	1700 (a)	520 (a)	990			990				1.2 U	1.07 U	1.02 U	1.93	1.4	1.1 U	1.11 U
bis(2-Ethylhexyl)phthalate	3.0	8000	73000			2.2		76 H W	2.2				1,2 U		3,53	2.95	5.88	1.1 U	1.11 U
Carbazole													1.4	1.07 U	1.02 U	0.996 L		1.1 U	1.11 U
Dibenzofuran Di-n-Butylphthalate	3,7 35	800	2,200,000			4500			4500				12 U 1.2 U	1.07 U 1.07 U	1,02 UF 1.02 U	0.996 L 0.996 L		1,1 U 1,1 U	1:11 U 1:11 U
Fluorene	3.9		2,200,000			5300			5300				2.3 ∪	1.07 U		4.12	2.98	220	1110
Naphthalene	620		284,000	2300 (a)	620 (a)				_	680	***		1.2 U	1.07 U	1.02 U	0.996 U	0.984 U	1.1 U	1.11 U
Pentachiotophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				5.8 U	5.34 U	5.11 U	4.98 U	4.92 U	5.5 U	5.56 U
Phenanthrene Phenol	6.3		284000 (b)	10200 (a)	2560 (a)	1,700,000							1.2 U 3.5 U	1.07 U 2.13 U	1.02 U 2.04 U	2.51 1.99 U	1.88 1.97 U	1.1 U 3.3 U	1.11 U 2.22 U
, posto	110			Activity)	coov (d)	I STATE OF THE STA		art to the last as a					0.0			2.0			- LL U
EPA Method SW8270SIM								1	1										
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	NA	NA	NA	NA	NA	NA
PAHs (µg/L)	1																		
EPA Method SW8270 - SIM																			
2-Methylnaphthalene	620	-	284,000						990				0.12 U 0.45	NA 0.639	NA 0.112	NA 1.16	NA 1,13	0.11 U	NA 0:0632
Acenaphthene Acenaphthylene	520 620 (b)		284,000	1700 (a)	520 (a)	990							0.12 U	0.0771	0.0509 U	0.211	0.262	0.11 U 0.11 U	0.116
Authracene	13		204,000			40,000			40,000	7 (L. 14			0.12 U	0.0771	0.214	0.289	0.231	0.11 U	0.0527: U
Benzo(a)anthracene	0.027					0.018	-		0.018	9.1			0.12 U	0.0551 U	0.102	0.0667	NA	0.11 U	0.0527 U
Benzo(a)pyrene	0.014					0.018 0.018	70		0.018	0.53			0.12 U 0.12 U	0.0551 U 0.0551 U	0.0916	0:0556 U 0:0556 U		0.11 U 0.11 U	0.0527 U 0.0527 U
Benzo(b)fluoranthene Benzo(g,h,i)perytene	6.16 (d)		0.55			0.018			0.016				0.12 U	0.0551 U	0.0509 U	0.0555 U		0.11 U	0.0527 U
Benzo(k)fluoranthene						0.018			0.018				0.12 U	0.0551 U	0.0509 U	0.0556 U	0.0503 U	0.11 U	0.0527 U
Chrysene		FORE				0.018			0.018				0.12 U	0:0551 U	0.0712	0.0556 U		0.11 U	0.0527 U
Dibenzofuran Eluoranthene	3.7 6.16			3980 (a)		140	-		140				0.12 U 0.13	NA 0.176	NA 0.387	NA 0.478	NA - 0.392	0.11 U 0.11 U	NA 0.0527 U
Fluorene	3.9			O300 (a)		5300	-		5300				0.57	0.738	0.285	1.98	2.57	0.11 U	0.432
Indenc(1,2,3-cd)pyrene						0.018	E a de de se		0:018				0.12.0	0.0551 U	0.0509 U	0.0556 U	0.0503 U	0 11 U	0.0527 U
Naphthalene	620		284,000	2300 (a)	620 (a)					680			0.12 U	0.352	0.397	0.478	0.694	0.11 U	0.0843
Phenanthrene Pyrene	620 (b)		284000 (b)			4000			4000				0,33 0.16	0.143 0.176	0.234 0.529	0.945 0.4	1.22 0.342	0.11 U 0.11 U	0.0527 U 0.0527 U
T yielle						1000			1000				5.1.5	••••	3.323	• • • • • • • • • • • • • • • • • • • •	5.6 .1.	5.11.0	0.002, 0
VOLATILES (μg/L)								ļ											
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)		200000 (e)				MAG.			1300			1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	130(e)		200000 (e)							1400			1.0	İΰ		1 Ŭ	Provident water trained instruments		e i i
4-Isopropyltoluene	9.8 (f)	**	104000 (f)		-	-			-				1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	130		200,000	5300 (a)		. 51 (g)	-	A 9 4	51	1700 110,000	13,000		1 U	0.4 U 1 U	0.3 U 1 U	0.3 U 1 U		10 1 U	04U 1U
Ethylbenzene isopropylbenzene	7.3 130		200000 (e) 200000 (e)	32000 (a)		2100			29,000	110,000			5.6	5.01	1,29		4.09	10	10
m,p-Xylene	13 (h)		8000 (h)			-			-	22000 (i)		•••	1.6	2 U	2 U	2 U	2 U	1 U	2 U
Methyl tert-Bulyl Ether		San Maria								31,000	550,000	443	1.0		10	MU.		12	1.0
n-Butylberizene	130 (e)		200000 (e)	-									1 U	1 U	1 U	1.87 	1 U	1 U	1 U
n Propyibenzene Naphthalene	130 (e) 620		200000 (e) 284.000	2300 (a)	620 (a)		-	-		680			2 2 5 U	1 U 1 U	1 U 1 U	<b>5./8</b> 1 U	1 U	= 1 U = 5 U	1 U
o-Xylene	1.8	40.00	8000 (h)	2300 (2)				F					10	İŪ	1.0	10	Committee of the commit	L Ú	
sec-Butylbenzene	130 (e)	CONTRACTOR SOUTH CONTRACTOR CONTR	200000 (e)		-							MAN TOWN TOWN TOWN TOWN	1.2	2.43	1.4	4.59	1.77	1 U	1 U
tert-Butyibenzene			200000 (e)	47500 (-)		45,000			200,000	70,000	uk 1		10	10	1-0-	1 U	10	1.0	ħΨ
Toluene	9.8		104,000	17500 (a)	-	15,000	-		200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U

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													MTF:	MTF	MIF	MTF	MIF	MTF	MTF
							SCREENING CRI	TERIA					<b> </b>						
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (	Concentration		1						
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	LW25D FZ04V 10/28/2003	LW25D 0402115-08 2/24/2004	LW25D 0406040-08 6/7/2004	LW25D 0408056-07 8/9/2004	LW25D 0411065-03 11/11/2004	LW26D FZ04T 10/28/2003	LW26D 0402115-05 2/24/2004
HYDROCARBONS (mg/L)															-				
NWTPH-HCID																			
Gasoline										12			NA.	NA	NA	NA	NA	NA	NA
Diesel	141									***			NA.	NA.	- NA		NA NA	NA 3	NA NA
MITTEL D.															100000000000000000000000000000000000000				CREAT STORY STREET, TANKED STAVE
NWTPH-Dx TPH-Diesel Range												İ	1.0	0.67	0.04	3.17	0.54		4-4
		 		-	-	-	-					 •	1.3	6.67 1.32	2.31 0.494 L		2.54 1.04	1.1 0.5 U	1.74 0.541
							**		1			***************************************		1,02	0,494 L	U.3U2 C	, and the same of	U.D.U	0.041
NWTPH-G																			
TPH-Gasoline Range		•-								12			0.43	0.877	0.409	0.98	1.38	0.35	0.268
								İ					i						
PRIORITY POLLUTANT										i			1						
METALS (mg/L)		44	_	l															
Arsenic (7060) Chromium (6010)	0.15 (j) (*) = <b>0.011 (k)</b>	18 (j)	6 25.(k)	0.34	0.15 0.065 (I)	0.00014 (g)(*)	0.34 (*)	0.15 (*) 0.074	0.00014 (*)			1.5 0.005	0.032	0.0261	0.0276	0.0425 0.0161	0.064	0.007	0.0098
Copper (6010)	0.001 (K) 0.009	≁ 341	25 (K) 53	0.05 (I)	0.065 (I) 0.011 (I)	3430	0.57	0.009			***	0.005	0.373	0.0517	0.0345	0.0161) 0.01 U	0.0862	0.012	0.0159
Copper (4010) Lead (7421)	0.009	28	323		0.011 (i)		0.013	0.0025 (*)				0.02	0.373	0.0441	0.0179	0.00816	0.0658	0.006	0.01 U 0.00272
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (1)	4.6	0.47	0.052	4.6	THE PARTY OF THE P	romena Marion Ja	0.01	0.28	0.0158	0.0084	0.0065	0.0603	0.01	0.005 U
Zino (6010)	0.032	Joseph A	1230	0.1 (1)	0.032 (1)	26	0.12	012	26			0.015	0.83	0,113	0.0647	0.0831	0.269	0.036	0.0116
			Constitution of the State of the Constitution					- The CO. C. Mark The Co. C.	and the second		50-2000 N-10-2-7-10-02	CONTRACTOR CONTRACTOR	0,000	21712			- Carnol	0.000	Handle Committee and Committee of Committee
BETX (μg/L)				l					ŀ										
EPA Method SW8021B																			
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA.	NA	NA	NA	NA	NA	NA
Ethylbenzene	7:3		200000 (f)	32000 (a)		2100			29,000	110,000			NA.	NA.	NA	NA.	NA NA	NA	NA NA
Toluene	9.8	-	104000	17500 (a)	-	15,000			200,000	78,000			NA.	NA.	NA	NA NA	NA NA	NA	NA
Xylenes, Total	13 (h)		_8000 (h)							22,000		- F 199 - 1	NA	NA.	INA.		NA.	NA NA	NA-
DIÓXIN/FURANS (ng/L) EPA Method SW8290 Total TEQ				-		5.1E-06	:				***	i	NA.	NA	NA	NA	NA.	NA	NA
				•				•	•	•									

**LE D-2** Page 19 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF
Γ							SCREENING CRIT	TERIA					ļ					
İ	Oregon	SLVs - Sur	face Water	Oregon A	mblent Water	Quality Criteria		ommended Water	Quality Criteria	Risk-Based	Concentration							
Sample Identification:						Fish	1			Construction	Volatilization	Site-	LW26D	LW26D	LW26D	LW27D	LW27D	LW27D
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0406040-06	0408066-01	0411059-05	FZ04S	0402115-06	0406040-05
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/7/2004	8/10/2004	11/10/2004	10/28/2003	2/24/2004	6/7/2004
SEMIVOLATILES (µg/L)												-						
EPA Method SW8270							1					i						
2,4-Dimethylphenol	42			2120 (a)		850			850				2.92 U	3.01 U	J 2.92 U	1.1 U	2.98 U	2.97 U
2-Methylnaphthalene	620 (b)		284000 (b)				4						= 0.972 U	1-1	J 0.975 U	1.1.0	0.993 U	0 989 U
Acenaphthene	520			1700 (a)	520 (a)	990			990	-			0.972 U	1	0.975 U	1.1 U	0.993 U	0.989 U
bis(2-Ethylhexyl)phthalate	3.0	8000	73000		- 18 18	2.2		A - 25 - 2	2.2	- 31			0.972 U	3.77			- 0.993 U	0.989 0
Carbazole					TARREST CONTRACTOR CON								0.972 U	1 (			0.993 U	0.989 U
Dibenzofuran	3.7				No.					2.2.2.4.2			0.972 ∪				0.993 U	0,989 U
Di-n-Butylphthalate	35	800	2,200,000		CC o Ball on the Commerce	4500			4500				0.972 U	1 (		1.1 U	0.993 U	0.989 U
Fluorene	3.9	production and the record				5300	(C)	-1-75% (60)	5300		-		0.972 U				0.993 U	
Naphthalene	620		284,000	2300 (a)	620 (a)					680			0.972 U	1 L		1.1 U	0.993 U	0.989 U
Pentachicrophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				4.86 U					4.95 U
Phenanthrene	6.3 110		284000 (b)		200740	4.700.000				-			0.972 U 1.94 U	1 L 2 L		1.1 U	0.993 U	0.989 U
Phenol	110			10200 (a)	∠300 (a)	1,700.000			7211222				1.34 U	21	95 U	3.2 U	1.99 U	1 98 U
EPA Method SW8270SIM							1											
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA NA	NA	NA	NA	NA	NA
PAHs (µg/L)				Ì			ļ											
EPA Method SW8270 - SIM							1			İ								
2-Methylnaphthalene	620		284,000			-		greener				CANCELL CONTRACTOR	NA	NA_	NA	0.11 U	NA NA	NA NA
Acenaphthene	520			1700 (8) =	520 (a)	990			990				0 0482 U	= 0.0498 U	COMPLEASED AND SERVICE AND SER	2. LANSING SALAN TRANSPORT LOSS SERVICES	0.0701	0.0871
Acenaphthylene	620 (b)		284,000			40,000			190	 0.00			0.0482 U	0.0498 U		0.11 U	0.0584 U	0.0484 U
Anthracene	13								40,000	9.1			0 0482 U	0.0498 L				0.0484-Ü
Benzo(a)anthracene	0.027					0.018	-		0.01B 0.018	0.53			0.0482 U 0.0482 U	0.0498 U		0.11 U 0.11 U	0.0584 U 0.0584 U	0.0484 U
Benzo(a)pyrene Benzo(b)fluoranthene	6.16 (d)				5.04	0.018			0.018	0.00			0.0482 U	0.0498 U	0.0509 U	0.11 U	0.0584 U	0.0484 U 0.0484 U
Benzo(g.h.i)perylene	0.10 (d)					0.010		* * *	300				0.0482 U	0.0498 U				0.0484 U
Benzo(k)fluoranthene						0.018	-		0.018		***	3-120-020	0.0482 U	0.0498 U	0.0509 U	0.11 U	0.0584 U	0.0484 U
Chrysene		100000000000000000000000000000000000000			V:	0.018			0.018	70.000			0.0482 U	0.0498 U		011 U	C.0584 U	0.0484 U
Dibenzofuran	3.7	**							**				NA	NA	NA	0.11 U	NA	NA
Fluoranthene	6.16			3980 (a)		140			140				0.0482 U	0.0498 Ú	0.0509 U	0.11 U	0.0584 U	0.0484 U
Fluorene	3.9	-	**			5300	-		5300				0.0482 U	0.129	0.204	0.11 U	0.0584 U	0.0484 U
Indeno(1,2,3 cd)pyrene			Marian.		4.5	0.018			0.018	and a contra			0.0482 U	0.0498 U	0.0509 U	0.11 U	0.0584 J	0.0484 U
Naphthalene	620		284,000	2300 (a)	620 (a)					680			0.0482 U	0.0498 U	0.0916	0.11 U	0.0584	0.126
Phenanthrone .	- 620 (b)		284000 (b)		A	3143							0.0482 U	0:0498 U		0.11 U	0.0584-U	
Pyrene	**					4000			4000			nes	0.0482 U	0.0498 U	0.0509 U	0.11 U	0.0584 U	0.0484 U
VOLATILES (μα/L)																		
EPA Method SW8260												i						
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	130 (e)	-			4.00					1400			i i i i	i Ü		Trú		ΙÚ
4-Isopropyltoluene	9.8 (f)		104000 (f)		**	v-			-	a			1 U	1 U	1 U	1 U	1 U	1 U
Benzene	130			5300 (a)		51 (g)			51	1700	13,000		030			1.0		030
Ethylbenzene	7.3	**	200000 (e)	32000 (a)		2100			29,000	110,000			1 U	1 U	1 U	1 U	1 U	1 U
Isopropylhenzene	130		200000 (e)										1 U×		T	1 ∪	1.0	1,0
m,p-Xylene	13 (h)		8000 (h)				2 MORTHURAL TRANSPORT			22000 (i)	A		2 U	2 U	2 Ú	1 U	2 U	2 U
Methyl tert-Bulyl Etner	300 Mg 10								4.0	31,000	550,000		U I	2.38	3.32	1: U	.10	1.0
n-Butylbenzene	130 (e)		200000 (e)	10070-1005-1006-100									1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	130 (e)		200000 (e)			2.19				204			1 U	1.0		Januar IV	14	THE STATE OF
Naphthalene	620		284,000	2300 (a)	620 (a)					680			1 U	1 U	1 U	5 U	1 U	1 U
c-Xylene	1.8 130 (e)		8000 (h) 200000 (e)	DECIMAL SECTION				四位 医二种 医二种		22000.(i)			1 U	1 U	commission of SETS of Section 2	1-U 1 U	Charles Transacture Programme	14.
sec-Butylbenzene tert-Butylbenzene	THE REST OF THE PARTY OF THE PA		200000 (e) 200000 (e)					1825-4-3-3			-	February 1	10	10	1 U		1 U	1 U
Toluene	9.8		104,000 (e)	17500 (a)		15,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U
Toldorio	3.0		104,000	11000 (a)		15,000		-	200,000	10,000			. 0	10	, 0	. 0	, 0	1.0

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													MTF	MTF	MTE	MTF	HAR MITTER IN	MTF
ſ							SCREENING CRIT	ERIA										
	Oregon	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (	Concentration		1					
Sample Identification: Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh GGC (Chronic)	Organism Only	Construction and Excavation Worker	Volatilization to Outdoor Air Occupational	Site- Specific Background	LW26D 0406040-06 6/7/2004	LW26D 0408066-01 8/10/2004	LW26D 0411059-05 11/10/2004	LW27D FZ04S 10/28/2003	LW27D 0402115-06 2/24/2004	LW27D 0406040-05 6/7/2004
HYDROCARBONS (mg/L)																		
NWTPH-HCID								Ī		1	i							
Gasoline					***			÷-		12			NA.	NA	NA	NA	NA	NA
Diesel													NA NA	NA NA	NA	NA NA	- NA	NA I
NWTPH-Dx																		
TPH-Diesel Range		_								l			4.07	1,37	2.18	0.54	0.598	2.43
TPH-Motor Oil Range			148-54-1	( at a		****							0.491 U	0.497 (		0.5 U		0.557-U
NWTPH-G		HEL -TAKES - LENGTH STREET	CONTRACTOR CONTRACTOR AND ACT OF THE	. Inches de la competition del			2 10 20 20 4 2 20 4 2 10 4 6 7 5 7 1 20 4		CORRECT PRESIDENT AND STORY	N -01-40						- Spelling of American Committee of Committe		
TPH-Gasoline Bange										12		*-*	0.129	0.202 J	0.211	0.25 U	0.100 U	0.24
i Fn-dasolitie hange	-				-		-	i -		12			0.125	0.202 3	0.211	0.23 0	0.100 0	0.24
PRIORITY POLLUTANT																		
METALS (mg/L)																		
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.00561	0.0112	0.0108	0.006	0.00598	0.0071
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)	0.065 (1)	3433	0.57	0.074		9 (184		0.005	0.0185	0.0171	0.0212	0.009	0.0181	0.0203
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009	2-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0			0.004	0.01 U	0.0812	0.0132	0.02	0.01 U	0.01 U
And the State of the Control of the	0 0025 (*)	28	323		0.0007 (1)(1)		0.065	0.0025 (*)				0.02	0.00213	0.0028	0.00353	0.014	0.00209	0.000552
Nickel (6010)	0.052	562 105	38 1230	0.33 (l) 0.1 (l)	0.052 (I) 0.1 (I)	4.6 26	0.47	0.052	4.6 26			0.01 0.015	0.005 U 0.0181	0.005 L <b>0.0173</b>	0.005 U 0.0276	0.01 0.047	0.005 U 0.0145	0.005 U 0.01 U
Zinc (6010)	UlzU	100	1400	U-1 (1)	V-110	S 40	0.12	0.18	40		de versione de la companya de la com	MUNICIPAL TO A STATE OF THE PARTY OF THE PAR	UA 101	0.0173	0.0210	3.047	5,0143	10,01,01
BETX (μg/L)						i												
EPA Method SW8021B																		
Benzene	130		200000	5300 (a)	**	51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000			NA NA	NA.	NA.	NA	, NA	NA.
Toluene	9.8		104000	17500 (a)	-	15,000	ANNUAL AND LANGUAGES	enal and the same	200,000	78,000			NA	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		8000 (h)						HEATH A	22,000			NA	NA:	NA	NA I	NA NA	NA.
DIOXIN/FURANS (ng/L) EPA Method SW8290 Total TEQ						5.1E-06			_				NA NA	NA	NA.	NA.	NA	NA
TOTAL TEX			-			3.12.00					1		1 115	140	170	NA.	1975	1975

**TABLE D-2** Page 21 of 40

### SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRIT	ERIA											
Sample Identification:	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Water	Quality Criteria	National Reco	ommended Water	Quality Criteria	Risk-Based Construction	Concentration Volatilization	Site-	LW27D	LW27D	LW35D	LW35D	LW35D	LW35D	LW35D
Sample identification: Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0408056-11	0411059-06	FZ04K	0402115-09	0406040-02	0408056-02	0411059-07
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/9/2004	11/10/2004	10/27/2003	2/24/2004	6/7/2004	8/9/2004	11/10/2004
SEMIVOLATILES (µg/L)																			
EPA Method SW8270 2,4-Dimethylphenol	42			2120 (a)		850			850				3.24 L	2.9 ∪	1.4 U	2.99 U	3.01 U	2.92 L	J 3.07 U
2-Methylnaphthalene	620 (b)		284000 (b)	2120 (a)		650			650				1.08 L		2.7				
Acenaphthene	520			1700 (a)	520 (a)	990		-	990	-			1.08 U		1.4 U		1 U	0.975 L	
bis(2-Ethylhexyl)phthalate	3.0	0008	73000	A4		2.2			2.2		100	- 50	1.08 U		1.4 U 1.4 U		1 Ų 1 ∪		
Carbazole Dibenzofuran	3.7												1.08 U						
Di-n-Butylphthafate	35	800	2,200,000			4500			4500				1.08 U	0.967 U	1.4 U		1 U	0.975 L	1.02 U
Fluorene	3.9					5900	- 11		5300				1,08 U						
Naphthalene Pentachlorophenol	620 15	-	284,000 1800	2300 (a) 19 (c)	620 (a) 15 (c)	3.0	19	15	3.0	680			1.08 U		1.4 U 7.1 U	**************************************	1 U 5,02 U	0.975 U 4.87 U	
Phenanthrene	6.3		284000 (b)			-				The state of the s			1.08 U	0.967 U	1.4 U	0.995 U	1 U	0.975 U	1.02 U
Phenol	110			10200 (a)	2560 (a)	1,700,000				T 1×			2.16 U	1.93 U	4.3 U	1.99 U	2.01-0	1.95 U	2.05 U
EPA Method SW8270SIM										İ									
Pentachlorophenol	15		1800	19 (c)	15 (e)	3.0	19	15	3.0				NA	NA	NA	NA	NA	NA	NA
PAHs (µg/L)																			
EPA Method SW8270 - SIM																			
2-Methylnaphthalene	620		284,000			-				-		AVERAGE NO.	NA	NA	0.14 U		NA	NA	NANA
Acenaphthene Acenaphthylene	520 620 (b)	HI WES	284,000	1700 (a)	- 520 (a)	990=			990			2025	0.104 0.0522 U	0.0689 0.0492 U	0.14 U 0.14 U		0.0513 U 0.0513 U	0,0487 U 0.0584	0.0503 U 0.0503 U
Authracene	13		204,000			40,000			40.000	2.70	***		0.0522 U		0.14 U		0.0513 U	0.0487 U	
Benzo(a)anthracene	0.027					0.018	-		0.018	9.1			0.0522 U	NA	0.14 U		0.0616	0.0487 U	
Benzo(a)pyrene Benzo(b)fluoranthene	0.014 6.16 (d)			- 100 - 100		0.018			0.018 0.018	0.53	-		0.0522 U 0.0522 U		0 14 U 0.14 U		0.0513	0.0487 U 0.0487 U	
Benzo(g,h,i)perylene						0.010				W		and the same	0:0522 U	THE STREET, SPECIAL PROPERTY AND ADDRESS.	0.14 U	manager and the second second second	0.0513 U	0.0487 U	0.101
Benzo(k)fluoranthene			-	-		0.018			0.018				0.0522 U	0.0492 U	0.14 U		0.0513 U	0.0487 U	0.0603
Chrysene Dibenzofuran	3.7	4			200	0.018			0.018				- 0.0522 U NA	0.0492 U NA	0.14 U 0.14 U	0.0509 U NA	0.0513 U NA	0.0487 U NA	0.141 NA
Fluorenthene	6.16			3980 (a)		140		60.00	140			10 T. O. W.	0.0522 U	0.0492 U	0.14 U	Note that the second se	0.0719	0.0487 ()	0.231
Fluorene	3.9	-		respiration surround to the state of the		5300	- 101 W. (1)		5300		 		0.146	0.0492 U	0.14 U	0.0509 U	0.0513 U	0.477	0.0503 U
Indeno(1,2,3-cd)pyrene	620		284.000	2300 (a)	620 (a)	0.018			0.018	680			0 0522-U 0.104	0.0492 U 0.128	0.14 U 0.14 U	0.0509 U 0.0509 U	0.0513 (U 0.133	0.0487 U 0.0487 U	0.0804 0.0503 U
Phenanthrene	620 (b)		284000 (b)	EDGC (a)	UZU (M)			V		V		(3.2	0.0522 U	0.0492 U	0.14 U		0.0519 U	0.0487 U	transfer commission to the first of the commission of the commissi
Pyrene		-				4000	-		4000				0.0522 U	0.0492 U	0.14 U	0.0509 U	0.0924	0.0487 ∪	0.241
VOLATILES (μg/L)																			
EPA Method SW8260							]												
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	130(e) 130 (e)		200000 (e)				(ET-15 (AUX.)			1300			1 U	1 U	1 U		1 U	1 U	1 U
t,3,5-Trimethylbenzene 4-Isopropyltoluene	9.8 (f)		200000 (e) 104000 (f)										1 U	1 U	1 U		1 U 1 U	1 U	1 U
Benzene	130		200,000	5300 (a)		51 (g)	5.00		51	1700	18,000		9.9 ∪		a a a u	0.4 U	0.3 U		
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000		****	1 U	1 U	1 U		1 U	1 U	1 U
Isopropylbenzene m,p-Xylene	130 13 (h)		200000 (e) 8000 (h)				***			22000 (1)		361 (1 <del>20-</del> 5.	1 U 2 U	2 U	2.2 1 U	2.05 2 U	1 U 2 U	1 U 2 U	1 U 2 U
Methyl tert-Butyl Ether			0000(11)							31,000	550,000	1 4	1.0	3.02	1.5	1 U	- 1°U.	1.⊍	
n-Butylbenzene	130 (e)		200000 (e)										1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)			-		680			1 U 1 U	1.U 1.U	1 U 5 U	1 U	1 U 1 U	1 U	(11) 1 U
o-Xylene	1.8		8000 (h)	2000 (a)	020 (a)	CONTRACTOR OF THE PARTY OF THE				22000 (i)			i i ŭ	- 1 Ŭ	10				ACTOR OF THE STREET, MARKET ST.
sec-Butylbenzene	130 (e)		200000 (e)			-	_	-	-	-			1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butyberizene Toluene	130 (e) 9.8		200000 (e) 104,000	17500 (a)		15,000			200,000	78,000			1 U 1 U	-1.UI 1.U	1 U	1 U a	1 U	1.U 1.U	1 U
LOIGENE	9.0	-	104,000	i i ouu (a)		15,000	- 1	-	200,000	10,000		1	10	10	10		10	10	10

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													MTF	MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRIT	ERIA											-
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (	Concentration		1						
Sample Identification:						Fish				Construction	Volatilization	Site-	LW27D	LW27D	LW35D	LW35D	LW35D	LW35D	LW35D
Laboratory Identification:	!			Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0408056-11	0411059-06	FZ04K	0402115-09	0406040-02	0408056-02	0411059-07
Date Collected:	Aquatic	Birds	Mammais	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	8/9/2004	11/10/2004	10/27/2003	2/24/2004	6/7/2004	8/9/2004	11/10/2004
HYDROCARBONS (mg/L)				į															
NWTPH-HCID								1											
Gasoline								-		12			NA NA	NA	NA	NA	NA	NA	NA
Diesel													NA.	NA .	NA:	NA	NA	NA.	NA NA
NWTPH-Dx									· ·										
TPH-Diesel Range			_		-					_			1.25	0.969	3.1	0.491	4.13	2.71	1.96
TPH-Motor Oil Range													0.539 U	0.647	0.5 t			0.48 L	
						THE PERSON NAMED IN COLUMN			BECT DESKIN HARVASH TOTAL	A STATE OF THE PARTY OF THE			terrorista religi Salifradi.						
NWTPH-G								!											
TPH-Gasoline Range	-						**			12			0.336	0.188	0.25 U	0.100 U	0.102	0.100 L	0.100 U
PRIADITY BOLL INCLUS				l						İ									
PRIORITY POLLUTANT METALS (mg/L)								İ	•										
Arsenic (7060)	0.15 (j) (*)	18 (i)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.00745	0.00534	0.018	0.00168	0.0038	0.001 L	0.0166
Chromium (6010)	0.011 (k)	10 (J)	25 (k)	0.29 (1)	0.065 (1)=	3433	0.57	0.10()	0.0001477			0.005	0.0211	0.0177	0.35	0.0165	0.0326	0.0172	0.061
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009				0.004	0.0157	0.01 U	0.37	0.01 U	0.0107	0.0241	0.0354
Lead (7421)	0.0025 (*)	28	323	0.043 (1)	0.0007/()(*)		0.065	0.0025 (*)			AL 785	0.02	0.0019	0.00136	0.12	0.00422	0.00821	0.00314	0.0307
Nickel (6010)	0.052	562	38	0.33 (f)	0.052 (l)	4.6	0.47	0.052	4.6		***	0.01	0.005 U	0.005 U	0.32	0.005 U	0.0114	0.0186	0.0647
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	. 26	-		0.015	0.0528	0.0173	0.93	0.0128	0.0444	0.0427	0.168
				i									ĺ						
BETX (μg/L)																			
EPA Method SW8021B																			
Benzene	130	LISEBALTON SOL	200000	5300 (a)		51 (g)			51 29,000	1700	13000		NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Ethylbenzene	7.3	2 T. W. W.	200000 (1)	32000 (a)		2100				110 000 78,000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Toluene Xvienes, Total	9.8	401-041-041-041-041-041-041-041-041-041-	104000	17500 (a)		15,000			200,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Aylenes, I Glai	13 (h)		8000 (h)		**					22,000			THE PARTY OF	49/1	INA	IN/A	INA	NA.	NAC.
DIOXIN/FURANS (ng/L)																			
EPA Method SW8290																			
Total TEO						5.1E-06	_			l	F#0		NA.	NA	NA	NA	NA	NA	NA
1000 1000				1		3200	ı	II.	l I			'							

Page 23 of 40

### BZTO104(e)023575

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MITE	MTF	MTF	MTF	MTF	MTF	MTF
I			-				SCREENING CRI							_					
	Oregon 5	SLVs - Surf	ace Water	Oregon A	mbient Wate	er Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration	1	1						
Sample Identification:	ļ					Fish		l	1	Construction	Volatilization	Site-	LW36D	LW37D	LW38D	LW39D	LW40D	LW45D	0
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0411059-08	0411059-09	0411059-10	0411059-11	0411150-01	0411065-04	FY82Q
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	11/10/2004	11/10/2004	11/10/2004	11/10/2004	11/29/2004	11/11/2004	10/24/2003
SEMIVOLATILES (µg/L)																			
EPA Method SW8270										1		-							
2,4-Dimethylphenol	42			2120 (a)		850			850	l			2.97 U	3.04 L	2.95 U	3.17 U	3.19 L	3.12 U	1 U
2 Methylnaphthalene	620 (b)		284000 (b)									10.00	0.99 U						
Acenaphthene	520			1700 (a)	520 (a)	990	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TW		990			S. Ref. 1855 355	0.99 U						1.2
bis(2-Ethylnexyl)phthalate	3.0	8000	78000	1100 (a)		200 - Sept			2.2			\$1900 E	0.99 U						
Carbazole	80 marks			-					TO SEE SEE SEE SEEDING SEEDING			SECRETED	0.99 U						1 U
Dibenzofuran	3.7					KAN MARKATAN	25/03/2012				14.76		0 99 U				THE RESERVE THE PROPERTY OF THE PERSON NAMED IN COLUMN TWO	Confidence of Comment of Spirits and Comment	THE REAL PROPERTY CONTRACTOR AND ADDRESS.
Di-n-Butylphthalate	35	800	2,200,000		PERESSAL PROPERTY.	4500	Marin Company		4500				0.99 U						1.8
Fluorene	3.9		2,200,000		a contract	5300		- 1 THE RESERVE	5300				0.99 U						
Naphthalene	620	u undrecuence film	284.000	2300 (a)	620 (a)					680			0.99 U			1.06 U	1.06 U		1 U
Pentachlorophenof	16		1800	19 (c)	15 (c)	3.0	19	16	3.0				4.95 U			5.29 U			
Phenanthrene	6.3		284000 (b)	19491		The state of the s		awazer Broad Macanisahur	X4Min No. (10)				0.99 U			1.06 U			1 U
Phenol	110		204000 (b)	10200 (a)	2560 (a)	1,700,000			400			10.00	1.98 U						
***************************************	a safetiment			.000,07	2000 (4)	THE WAY WAY		Children gran parameter	and delicate and the second	Section of the second			,,,,,,			and the second second			VOICE SELECTION OF THE PARTY OF
EPA Method SW8270SIM								1	ľ	1		1							
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA	NA	NA	NA	NA.	NA	NA
								[	1	1		1							
PAHs (µg/L)							ŀ		i	i		l							
EPA Method SW8270 - SIM												i							
2-Methylnaphthalene	620		284,000										NA NA	NA	NA	NA	NA	NA	NA
Acenaphthene	520			1700 (a)	520 (a)	.990			990		111	100	0.0505 U	0.054 U	0.12	0.145	0.05_U	0.473	NA NA
Acenaphthylene	620 (b)		284,000		-	-							0.0505 U	0.054 U	0.05 U	0.0517 U	0.05 U	0.105	NA
Anthracene	13					40,000		15.7.1	40,000	34 (4)			- 0,0505 U	.0.054 U	0.05 €	0.0517 U	0.05 U	5.44	NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA NA	NA NA	NA.	NA	N.A	NA	NA
Berizo(a)pyrene	0.014					0.018	A 2	- 30	0.018	. 0.53			0,0505 U	0.054 U	0.05 U	0.0517 U	0.05 U	0.0525 U	NA .
Benzo(b)fluoranthene	6.16 (d)					0.018			0.018				0.0505 U		0.05 U	0.0517 U	0.05 U	0.0525 U	NA
Benzo(g,h,i)perylene		70			10.0								0.0505 U	0.054 U	0.05 U	0.0517 U	0.06 U	0.0525 U	NA B
Benzo(k)fluoranthene						0.018			0.018	i			0.0505 U	0.054 U	0.05 U	0.0517 U	0.06 U	0.0525 U	NA
Chrysene						0.018			0.018			34-	0.0505 U	0.054 U	0.05 U	0.0517 U	0.05 ∪	0.0525 U	NA = ;
Dibenzoluran	3.7	No. Chairest											NA	NA_	NA	NA	NA	NA .	NA
Fluoranthene	6.16			3980 (a)		140			140				0.0505 U	0.0756	0.05 U	0.0517 U	0.05 ∪	0,116	NA NA
Fluorene	3.9					5300	-		5300	The state of the s			0.0505 U	0.054 U	0.19	0.0517 U	0.05 U	0.935	NA
Indenc(1,2,3-cd)pyrene				A-1-		0.018			0.018				0.0505 U	0.054 U		0.0517 U	0.05 U	0.0525 U	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)	en sugaras, continue considerati				680			0.0505 U	0.054 U	0.08	0.114	0.09 U	0.557	NA
Phenanthrene	620 (b)		284000 (b)			745 <del>-</del>			8 T				0.0505 U	0.054 U	0.05 U	0.0517 U			NA
Pyrene			-			4000			4000				0.0505 U	0.0864	0.05 U	0.0517 U	0.05 U	0.0945	NA
VOL ATTIL TO (																			
VOLATILES (µg/L)																			
EPA Method SW8260	120(-)		B00000 (-)	İ						1000			l						
1,2,4-Trimethylbenzene	130(e)		200000 (e)				7.500.00	rav serios		1300			1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	130 (e)		200000 (e)	Sec .	*****				a de ser de la	1400		F 100-702 14	1.0	magazine de la respectación de la companya del companya del companya de la compan				and waterway programmer region.	
4-Isopropyltoluene	9.8 (f)		104000 (f)				981-79						1 U 0,3 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene			200,000	53D0 (a)		51 (g)			<b>51</b> 29,000	1700	13,000		0.3 U. 1 U			0.3 U	<b>9.9 U</b> 1 U		
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100		21 1351 W. H. H.	29,000	110,000			10	1 U	1 U	1 U		1 U	1 U
Isopropylbenzene			200000 (e)							THE CASE OF THE PARTY.						. 1U			
m.p-Xylene	13 (h)		8000 (h)							22000 (i)			2 U	2 U	2 U	2 U	2 U	2 ∪	1 U
Methyllert Butyl Ether	400 ( )		ACCUSED THE PROPERTY.	40.0	ulter)		199-			31,000	650,000		to destidante messentamento	10					NA .
n-Butylbenzene	130 (e)		200000 (e)							-	CONTRACTOR STREET		1 U	1 U	1 U	1 U	1 U	1.33	3
n-Propy berizene	130 (e)		200000 (e)		man and the second	70 - Marine webservorser-som	E M									1.0	WALKSTON TO STREET, ST		29
Naphthalene	620		284,000	2300 (a)	620 (a)	- 53 / 5 / 5 / 5 / 5				680			1 U	1 U	1 U	1 U	1 U	1 U	5 U
6-Xylene	1.8		8000 (h)					and the second second		22060 (i)		(Marie Marie and Allendaria	91 W	- N. S. S.					1 U
sec-Butylbenzene	130 (e)		200000 (e)		-			-	 2-4519500-05000				1 U	1 U	1 U	1 U	1 U	2.85	5.6
tert Butylberizene	=130 (e)		200000 (e)									The second	1 U	10	- 10	1 1/2	1.0	1.0	3.40
Toluene	9.8		104,000	17500 (a)	4-	15,000			200,000	78.000			1 U	1 U	1 U	1 U	1 U	1 U	1.4
				•		•	,	,		•		,							

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													MTF	MTF	MTF	MTF	MTF	MTF	MTF
Г							SCREENING CRIT	ERIA											
	Oregon 9	SLVs - Surfa	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria		Concentration		1						
Sample Identification:				l _ ,		Fish		٠. ـ ا		Construction	Volatilization	Site-	LW36D	LW37D	LW38D	LW39D	LW40D	LW45D	0
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0411059-08	0411059-09	0411059-10 11/10/2004	0411059-11 11/10/2004	0411150-01 11/29/2004	0411065-04 11/11/2004	FY82Q 10/24/2003
	Aqualio	pilda	Mariniais	_ Acute	Official	Only	CINO (Acute)	CCC (Criteria)	CHIY	VEOIRGI	Occupational	Background	111/10/2004	11/10/2004	11/10/2004	11/10/2004	11/28/2004	11/11/2004	10/24/2003
HYDROCARBONS (mg/L)																			
NWTPH-HCID																			
Gasoline						-		-	-	12			NA.	NA_	NA.	NA NA	NA	NA	NA
Diesel													NA .	NA	NA.	NA.	NA.	NA NA	NA
NWTPH-Dx									İ	Į.									
TPH-Diesel Range													0.252	0.25 L		0.455	0.263	3.91	NA
TPH-Motor Oil Range			<u> </u>	-			***		M		- **		0.58	0.5 L	0.702	0.52	0.672	1.9	NA.
NWTPH-G									1	İ									
TPH-Gasoline Range	***			-						12	***		0.100 U	0.100 L	0.120	0.133	0.100 L	0.776	NA
				İ															
PRIORITY POLLUTANT METALS (mg/L)													l						
	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)	l		1.5	0.001 U	0.00578	0.00867	0.0107	0.00411	0.0532	NA
	0.011 (k)		25 (k)	0 29 (6	0.065 (1)	9433	0.57	0.074	0.00014()			0.005	0.005 U	0.0261	0.0138	0.0124	0.0071	0.0332	NA NA
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009		-		0.004	0.01 U	0.0196	0.01 U				NA
Lead (7421)	0.0025 (*)	28	323	(i 043 (i)	(*)(1) YC00.0-		0.065	0.0025 (*)				0.02	0.00025 U		0.0002 U		0.00167		NA NA
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (1)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.0117	0.005 U			0.132	NA
Zinc (6010)	0 120	105	1230	0.1 (1)	Q.1 (I)	26	0.12	0.12	26			0.015	0.01 U	0.0505	0.01 U	0.01 L	0.206	0.416	NA NA
BETX (µg/L)																			
EPA Method SW8021B																			
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (t)	32000 (a)		2100			29,000	110,000	kratickéholom semiakr		NA:	NA.	NA.	NA.	NA		NA .
Toluene	9.8	e 100m/k rosk-1	104000	17500 (a)		15,000			200,000	78,000			NA	NA	NA	NA	NA	NA	NA
Xylanes, Total	13 (h)		9000 (h)							22,000			NA :	NA.	NA.	NA.	_ NA	NA	NA.
DIOXIN/FURANS (ng/L)										ĺ	İ								
EPA Method SW8290						ı													
Total TEQ						5.1E-06			411				NA	NA	NA	NA	NA	NA	NA

Page 25 of 40

### BZTO104(e)023577

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	MTF (%)
							SCREENING CRI											
	Orego	on SLVs - Su	ırface Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration	]	]		W		W	
Sample Identification:						Fish		l		Construction	Volatilization	Site-	R	RW2	Dup of RW2	RW2	Dup of RW2	RW2
Laboratory Identification:		Dist.		Fresh	Fresh	Consumption	Fresh	Fresh CCC (Chronic)	Organism	and Excavation Worker	to Outdoor Air Occupational	Specific	FY82R 10/24/2003	FY82D 10/23/2003	FY82A 10/23/2003	0402113-04 2/23/2004	0402113-05 2/23/2004	0406059-02 6/9/2004
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Crironic)	Only	worker	Оссоранован	Background	10/24/2003	10/23/2003	10/23/2003	2/23/2004	2/23/2004	6/9/2004
SEMIVOLATILES (µg/L)																		
EPA Method SW8270				ŀ					1			1						
2,4-Dimethylphenol	42			2120 (a)		850			850				1 U	3 U	3 U			3.07 U
2 Methylingonthalene	620 (b)		284000 (b)		排降器								1 U	7.2 J	5.4 J	0.989 U		5.41
Acenaphthene	520			1700 (a)	520 (a)	990			990				1 U	1 U	1 U			1.02 U
bis(2-Ethylhexyl)phthalate	3.0	8000	73000			2.2			2:2				= 1U		10			
Carbazole	-							THE SHAPE OF THE SAME SAME	toda menia temperatura				1 U	1 U	1 U			1.02 U
Dibenzofuran	3.7	70070000											4 U					
Di-n-Butylphthalate	35	800	2,200,000			4500			4500	-			1 U 2 U	1 U	1 U	0.989 U		1.02 U
Fluorene	3.9					5300			5300	600		2.50 W.S.	2 U 1 U		1.3	0,989 U 0,989 U		1.02.0
Naphthalene Pentachlorophenol	620	2000	284,000 -1800	2300 (a) 19 (c)	620 (a) 15 (c)	3.0	19	15	3.0	680			5 U I	8.1	6.4	4.05 U	77	1.56 47.3
Phenanthrene	15 6.3		284000 (b)		10 (6)	3.0	34.78.25.25 January	1.7	20	1 1 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1 U	1 U	1 U	0.989 U		1.02 U
Phenol	110		204000 (D)	10200 (a)	- 2560 (a)	1,700,000							3 Ú	2 U	CONTRACTOR OF THE PARTY OF THE			
11010	100000	THE TRUE LA		TOZOC (B)	-casta)	10000000		The second secon	PONJETA CHE CHE CHARLE							1,000	1,000	Elso S
EPA Method SW8270SIM	l							1		l								
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				NA	NA	NA	8.51	NA	NA
								1										
PAHs (μg/L)																		
EPA Method SW8270 - SIM							]						NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	620		284,000	790070	F007-V	990			-	- 			NA NA	NA NA	NA NA	NA NA	NA NA	
Acenaphthene Acenaphthylene	520 620 (b)		284,000	1700 (a)	520 (a)	990			390				NA NA	NA NA	NA NA	NA	NA.	NA NA
Anthracene	13		204,000			40,000			40.000				NA NA	NA NA	NA.	NA:	NA NA	NA.
Benzo(a)anthracene	0.027			10		0.018			0.018	9,1			NA NA	NA.	NA	NA	NA NA	NA NA
Benzo(a)pyrena	0.014					0,018	10.00		0.018	0.53			NA NA	NA NA	NA.	NA.	NA.	
Benzo(b)fluoranthene	6.16 (d)				**	0.018		-	0.018	-			NA	NA	NA	NA	NA	NA
Benzo(g.h.i)porylene								(#.px					NA NA	NA.	NA T	NA.	NA.	NA NA
Benzo(k)fluoranthene		-				0.018			0.018				NA NA	NA.	NA	NA	NA	NA NA
Chrysene						0.018		Marie and the	0.018				NA NA	NA NA	NA	NA.	N.A	NA.
Dibenzofuran	3.7		TOTAL CONTRACTOR CONTRACTOR							Por Million State of March 1997		ar agent regionalization	NA	NA	NA NA	NA	NA NA	NA NA
Fluoranthene	5.16			3980 (a)		140			140				NA.	NA.	, NA	NA.	NA -	NA .
Fluorene	3.9					5300			5300				NA NA	NA	NA	NA	NA	NA_
Indeno(1,2,3-cd)pyrene				0000 / 1		0.018			0,018	000			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)		· NAME AND DESCRIPTION OF PERSONS ASSESSED.			680			NA NA	NA NA	NA NA	NA NA	NA NA	NA
Phenanthrene Pyrene	BZU (D)		204000 (0)		March Ton Sale	4000		April and Back passes	4000				NA	NA NA	NA NA	NA.	NA NA	NA
Fyletie						4000		_	4000	-			1975	1975	1473	INC	1471	130
VOLATILES (µg/L)				1														
EPA Method SW8260				1														
1,2,4-Trimethylbenzene	130(e)		200000 (e)	-		nodritanostro detti ottolago in catti				1300			1 U	16	17	61	67.9	20.5
1.3,5 Trimethylbenzene	130 (e)		200000 (e)							1400			Jan Bu	4.4	5.1	18.1		6.98
4-Isopropyltoluene	9.8 (f)		104000 (f)			ENGLANGE CHEST CHARACT			 				1 U	1 U	1 U	1.85	2.19	1 U
Benzené	130		200,000	5300 (a)		51 (g)			51	1700 110.000	13,000		1.U 3.8	3,6 2,6	3,4 2,7	5.5 10.5	5.96	3.57 3.41
Ethylbenzene	7.3 130		200000 (e) 200000 (e)	32000 (a)		2100		-	29,000	COLUMN TWO STREET			3.8 43	2.6 28	2.7	36.5	40.8	3.41 39.3
lsopropylbenzene m.p.Xvlene	130 13 (h)		8000 (e)	-						22000 (i)			9.4	4.3	4.5	4.66	5.89	3.34
Methyl tert-Butyl Ether	13 (11)		6300 (II)							31,000	550,000		NA NA	NA NA	NA.	4.00 1 U	3.09	3.34
n-Butylbenzene	130 (e)		200000 (e)				284 (83 322) (83			-			1.7	3.6	3.9	4.54	5.23	4.62
n-Propylbenzene	130 (e)		200000 (e)	11.									20	35	36	55.3	61,9	60.8
Naphthalene	620		284,000	2300 (a)	620 (a)	-	-			680			5 U	5 U	5 ∪	3.26	4.49	5.64
o Xylene	1.8		8000 (h)							22000 (i)			1.0	1 U	1 U	1.67	2.22	7 1 U
sec-Butylberizene	130 (e)		200000 (e)	- Committee of the Comm				-					4.3	5.1	5.4	7.63	8.99	8.48
tert Butyibenzene	130 (e)		200000 (e)	EFAIR								Law at M	1.0	1.2	1.2	910	1 U	The state of the s
Toluene	9.8	-	104,000	17500 (a)	-	15,000			200,000	78,000			2.5	1 U	1 U	1 U	1 U	1 U
l				1		ı			,		ı	ı						

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													MTF	MTF	MTF	MTF	MTF	MTF
							SCREENING CRIT	TERIA										
	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (	Concentration		1		W		w	
Sample Identification:						Fish				Construction	Volatilization	Site-	R	RW2	Dup of RW2	RW2	Dup of RW2	RW2
Laboratory Identification: Date Collected:		Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	FY82R 10/24/2003	FY82D 10/23/2003	FY82A 10/23/2003	0402113-04 2/23/2004	0402113-05 2/23/2004	0406059-02 6/9/2004
E	Aquatic	biras	Mammais	Acute	Chronic	Only	CIVIC (ACUITE)	T CCC (CHRONIC)	Ority	worker	Occupational	васкугоста	10/24/2003	10/23/2003	10/23/2003	2/23/2004	2/23/2004	6/9/2004
HYDROCARBONS (mg/L)				ļ			İ	Ì										
NWTPH-HCID																		
Gasoline	errencinasirus eres	at 1864-0759A-1564-077								12			NA NA	NA	NA	NA	NA	NA
Diesel											The same of the sa		NA -	NA	NA.	. NA	NA NA	NA:
NWTPH-Dx																		
TPH-Diesel Range	TOTAL TOTAL TRANSPORT								-				NA NA	0.73	0.72	1.04	1.08	1.64
TPH Motor Oil Flange					AND RESERVED.						***		NA	0.5 U	0.5 ∪	0,493 L	0.492 U	0.517 U
NWTPH-G										ľ								
TPH-Gasoline Range	-						-			12		***	NA	1.2	1.2	2.61	2.44	1.72
PRIORITY POLLUTANT								İ										
METALS (mg/L)																		
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	NA	0.019	0.018	0.0223	0.0214	0.0188
Chromium (6010)	0.011 (k)		25 (k)	0.29 (1)	0.065 (i)	3433	0.67	0.074				0.005	NA NA	0.005 U	0.005 U	0.0076	0.0077	0.0136
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009				0.004	NA	0.002 U	0.002 U	0.01 U		0.01 U
Lead (7421)	0.0025 (*)		323		0.0007 (l)(*)		0.065	0.0025 (3)				0.02	NA.	0,001_U	CONTRACTOR OF THE PARTY OF THE	A LANCE OF THE PARTY OF THE PAR	0.0001 U	
Nickel (6010)	0.052	562	38	0.33 (1)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	NA	0.01 U	0.01 U	0.005 U		0.005 U
Zinc (6010)	0.120	105	1230	0.1(1)	0.1 (1)	26	0,12	0.12	26		医肾 医毛溶	0.015	NA	0.062 J	0.008 J	0.0724	0 01 U	0.0105
BETX (μg/L)				İ														
EPA Method SW8021B																		
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000			NA	NA		NA	NA	NA S
Toluene	9.8	ETHER BOY MEST	104000	17500 (a)		15,000	Samour to be all sales and the		200,000	78,000			NA	NA NA	NA	NA NA	NA NA	NA NA
Xylenes, Total	13 (h)		8000 (h)							22,000	***		NA NA	NA	NA NA	NA .	NA ,	NA NA
DIOXIN/FURANS (ng/L)																		
EPA Method SW8290												ļ						
Total TEQ	-	-				5.1E-06	***						NA	NA	NA	NA	NA	NA

**D-2** Page 27 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													MTF	MTF	MTF	MTF	MTF	BTTF	BTTF
							SCREENING CRI												
Sample Identification		n SLVs - Surfa	ace Water	Oregon A	nbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based Construction	Concentration Volatilization	Site-	W Dup of RW2	RW2	W Dup of RW2	RW2	W Dup of RW2	LW29D	LW29D
Laboratory Identification	6			Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0406059-01	0408036-06	0408036-03	0411051-04	0411051-01	FZ04D	0402080-07
Date Collected	: Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/9/2004	8/5/2004	8/5/2004	11/9/2004	11/9/2004	10/27/2003	2/17/2004
SEMIVOLATILES (µg/L)	İ																		
EPA Method SW8270 2,4-Dimethylphenol	42			2120 (a)		850			850				2.92 ∪	3 U	3 L	3.04 L	J 2.95 U	3.1 U	2.88 UJ
2-Methylnaprithalene			284000 (b)	2120 (a)		186				N ROSE			6.08	5.49	6.18	2.22	2.67		0.961 UJ
Acenaphthene	520		-	1700 (a)	520 (a)	990	-		990				0.975 ∪			1.01 L		1 U	0.961 UJ
bis(2-Ethylhexyl)phthalate	3.0	8000	73000	50.1		2.2		200	2.2			1.00	0.975 U					10	2.13.UJ
Carbazole Dibenzofuran	3.7												0.975 U 0.975 U					1 U	0.961 UJ 0.961 UJ
Di-n-Butviphthalate	35	800	2,200,000			4500			4500				0.975 U					1 U	0.961 UJ
Fluorene	3.9			2.3		5300	-		- 5300				0.975.U					1 U	0.961-UJ
Naphthalene	620		284,000	2300 (a)	620 (a)		<u> </u>	The State of the S		680	BARCHATTIS TORRAT BRALLIAN	CONTRACTOR AND ADDRESS OF THE STREET	1.69	1.58	1.87	1.01 L		1 U	0.961 UJ
Pentachiorophenol	15 6.3		1800 284000 (b)	19 (c)	15-(c)-	3.0	19	15	3.0				46.7 0.975 U	12.9 1 U	13.5 1 U	5 06 L		5/2 U	4.8 UJ 0.961 UJ
Phenanthrene Phenal	110		284000 (D)	10200 (a)	-2560 (a)	1,700,000			SHOULD BE				0.975 U					210	0.961 03
ad additional Co. 2 Co.						- Principal				ers des parqueens								The state of the s	
EPA Method SW8270SIM																		l	
Pentachlorophenol	15	-	1800	19 (c)	15 (c)	3.0	19	15	3.0	-			NA	NA	NA	1.84	2,12	NA NA	1.92 UJ
PAHs (µg/L)	1																		
EPA Method SW8270 - SIM																			
2-Methylnaphthalene Acenaphthene	620 520		284,000	 1700 (a)	520 (a)	990			990				NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U 0 H U	NA 0.0489 UJ
Acenaphthylene	620 (b)	-	284.000	19.00 (0)	020 (a)	782				-			NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U	0.0489 UJ
Anthracene	13					40,000			40,000				NA.	. NA	NA:	NA:	NA .	0.1 U	0.0489-UJ
Benzo(a)anthracene	0.027	er en en en				0.018			0.018	9.1			NA NA	NA NA	NA	NA	NA	0.1 U	0.0489 UJ
Benzo(a)pyrene Benzo(b)fluoranthene	0.014 6.16 (d)				e	0.018			0.018	0.53			NA II	NA NA	NA NA	NA NA	NA NA	0.1 U 0.1 U	0.0489 UJ 0.0489 UJ
Benzo(g,bi)perylene	6.16 (u)					0.016	*		0.018				NA.	NA I	NA NA	NA NA	NA NA	0.1 U	0.0489 UJ
Benzo(k)fluoranthene		**************************************				0.018		••	0.018				NA NA	NA	NA	NA	NA	0.1 U	0.0489 UJ
Chrysene						0.018			0.018					NA	NA		A NA	01.0	0.0489 UJ
Dibenzofuran Fluoranthene	3.7 6.16		-	3980 (a)		140	DA AGER		140				NA NA	NA NA	NA NA	NA NA	NA Na	0.1 U	NA 0.0489-UJ
Fluorene	3.9					5300			5300				NA NA	NA	NA NA	NA	NA NA	D.1 U	0.0489 UJ
Indeno(1,2,3 cd)pyrene						0.018			0.018	N / A			NA .	NA.	NA.	- NA	NA.	0.1 U	0.0489 ÚJ
Naphthalene	620		284,000	2300 (a)	620 (a)					680		***	NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U	0.0489 UJ
Phenanthrehe Pyrene	620 (b)	-11	284000 (b)			4000		7	4000				NA NA	NA NA	NA NA	NA NA	NA NA	0.1 U 0.1 U	0.0489 UJ 0.0489 UJ
•	_		-			7000					i	ļ						50	0.0-00 00
VOLATILES (µg/L)											I								
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			19.8	36	33.8 J	4.51	5.6	1 U	1 U
1,3,5-Trimethylbenzene	130(e)		200000 (e)							1400			7.1	11.5	10.2 J	1.03	1.81	, iŭ	10
4-isopropyltoluene	9.8 (f)	**	104000 (f)				_						1 U	1.25	1.1 J	1 U		1 U	1 U
Benzene	130	***	200,000	5300 (a)		51 (g)			51	1700 110.000	13,000		3.32 3.97	3.88 6.19	3.84 J	1.89	1.06	1 U	0:4 U
Ethylbenzene Isopropylbenzene	7.3 130		200000 (e) 200000 (e)	32000 (a)	···	2100			29,000	110,000			3.97	6.19 60.9	5.97 J 64.8 J	1.89 57.3	2.06 62.4	10	1 U
m,p-Xylene	13 (h)		8000 (h)				Commence of the last of the la			22000 (i)			3.08	9.61	8.88 J	2 U		1 U	2 U
Methyl tert-Butyl Ether				DEACH.						31,000	560,000		1 U	1.0	1:0	- 10		1.0	3/2 10
n-Butylbenzene	130 (e)		200000 (e)						-				4.5 62.7	5.36	5.13 J	4.91	6.09	1 U	1 U
n-Propylberizene Naphthalene	130 (e) 620		200000 (e) 284,000	2300 (a)	620 (a)		-			680		***	6.03	68.1 2.99	69.7 J 2.74 J	72.2 1 U	77. <b>6</b>	1 U 5 U	1 U
o-Xylene	1.8	Sept.	284,000 8000 (h)	2300 (a)	020 (a)					22000 (i)	***		0.03	2.75	2.51 J	1.7	1,82	10	10
sec-Butylbenzene	130 (e)		200000 (e)		A - 100 - 10		-		-				8.82	10.7	10.7 J	7.84	9.22	1 U	1 U
tert-Butylbenzene	130 (e)		200000 (e)										1.64	1.75	1.82 J	1,48	1.66	14	10
Toluene	9.8		104,000	17500 (a)		15,000		-	200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U

7/19/05 \\Edmdata\wproc\231\009\132\Phiii Ri 071905\Phiii Ri Rpt\_App D Lower GW 1

Page 28 of 40

													MTF	MTF	MTF	MTF	MTF	BTTF	BITE
i							SCREENING CRIT	ERIA					1		-			+	
	Oregon	SLVs - Surfa	ce Water	Oregon A	nbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (	Concentration		l w		W		W	ŀ	
Sample Identification:	,					Fish				Construction	Volatilization	Site-	Dup of RW2	RW2	Dup of RW2	RW2	Dup of RW2	LW29D	LW29D
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation	to Outdoor Air	Specific	0406059-01	0408036-06	0408036-03	0411051-04	0411051-01	FZ04D	0402080-07
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/9/2004	8/5/2004	8/5/2004	11/9/2004	11/9/2004	10/27/2003	2/17/2004
HYDROCARBONS (mg/L)																			
NWTPH-HCID				1															
Gasoline										12			NA.	NA	NA	NA	NA	NA.	NA
Diesel					100	****							NA=	NA-	NA.	- NA	NA NA	NA.	NA NA
NWTPH-Dx																			
NWTPH-Dx TPH-Diesel Range													1,45	1.42	1.42	0.904	0.991	0.25 U	0.242 U
TPH-Dieser Hange									2 00000 100 1000				1,45 0.5 U						
TERMOLOI OIL Hange				100									19:0-10		0.450	O WALL C	U.HOT O	The state of the s	1 10 100 9
NWTPH-G																		l	
TPH-Gasoline Range										12			1.83	1.72	1.8	1.18	1.23	0.25 U	0.100 ⊔
PRIORITY POLLUTANT																		į	
METALS (mg/L)						i													
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.0188	0.0194	0.02	0.0202	0.0207	0.004	0.0061
Chromium (6010)	0.011 (k)		25 (k)	0.29 (f)	0.065 (1)	3433	0.57	0.074		9.0		0.005	0.0144	0.0152	0.0143	0.0129	0.0197	0.019	0.0137
Copper (6010)	0.009	341	53	0.05 (l)	0.011 (1)		0.013	0.009		A AGO THE THE THE		0.004	0.01 U					0.019	0.01 U
Lead (7421)	0.0025 (*)	28	323	0.043 (I)	0.0007 (l)(*)		0.065	= =0.0025 (*)		<b>建型制度</b> 基	2	0:02	0.0001 U					0.006	0.00171
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6	A STATE OF THE STA		0.01	0.005 ∪	0.005 U			0.0412	0.02	0.005 U
Zinc (6010)	0.120	105	1230	0,1 (1)	0.1 (1)	26	0.12	0.12	26		# <b></b>	0.015	0.011	0.01 U	0.01	J 0.0116 U	J 0.0306 J	0,04	0.0336
BETX (µg/L)																			
EPA Method SW8021B																		ĺ	
Benzene	130		200000	5300 (a)		51 (g)	Canada Channel C Marin Proposition Control	CONTRACT CARRY CARRY CARRY	51	1700	13000		NA.	NA NA	NA NA	NA	NA	NA NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000			NA NA	NA "	NA.	III NA	NA NA		NA .
Toluene	9.8		104000	17500 (a)	 109: Tible: Tible: Tible:	15,000			200,000	78,000			NA NA	NA	NA_	NA_	NA NA	NA NA	NA
Xylenes, Total	13 (h)		8000 (h)							22,000			NA.	NA .	NA.	NA	NA	. Ak	NA .
DIOXIN/FURANS (ng/L)				l															
EPA Method SW8290																		1	
Total TEQ						5.1E-06							NA	NA	NA	NA	NA	NA	NA
1 00000				'					!	•		!							,

BLE D-2 Page 29 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													; « влте · · ·	BTTF	BTTF	BTJF	BUTF	BTTF
							SCREENING CRI	TERIA										
	Oregon	SLVs - Surf	ace Water	Oregon /	Ambient Wate	r Quality Criteria		ommended Water	Quality Criteria		Concentration							
Sample Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW29D 0406050-07	LW29D 0408006-07	LW29D 0411047-03	LW30D FZ04F	LW30D 0402085-02	LW30D 0406050-09
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/8/2004	8/2/2004	11/8/2004	10/27/2003	2/18/2004	6/8/2004
SEMIVOLATILES (µg/L)						<del></del>		i '	i i	Ì	•	i i						
EPA Method SW8270							1											
2,4-Dimethylphenol	42			2120 (a)	***	850	-		850				√ 2.96 U	3.04 U	3.03 U	3.3 U	3.09 U	2.93 U
2-Methylnaphthalepe	620 (b)		284000 (b)					2 8 6 7 6	P 81 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		. The second		0.987 U	1.01 U	1.01:U	1.1 U	= 1.03 U	0.976 U
Acenaphthene	520			1700 (a)	520 (a)	990		affections in about the	990	-			0.987 U	1.01 U	1.01 U	1.1 U	1.03 U	0.976 U
bis(2-Ethylhexyl)puthalate  Carbazole	3.0	8000	73000			2.2		Adles .	ii ji 2.2				0.987 U 0.987 U	1.37 1.01 U	1.33 1.01 U	1.1 U 1.1 U	1.03 U 1.03 U	0.976 U 0.976 U
Dibenzofuran	3.7					-			A				0.987 U	101 U	1.01.0	inu		0.976 U
Di-n-Butyiphthalate	35	800	2,200,000			4500			4500				0.987 ∪	1.01 U	1.01 U	1.1 U	1.03 U	0.976 U
Fluorene	3.9		e cayear in			5300			5300		>>+		0.987 U	1.01 U	1.01 U	11 U		0,976 U
Naphthalene	620		284,000	2300 (a)	620 (a)	3.0	19			680			0.987 U 4.94 U	1.01 U 5.07 U	1,01 U 5,05 U	1.1 U 5.6 U	1.03 U 5.15 U	0.976 U 4.88 U
Pentachlorophenol Phenanthrene	15 6.3		1800 284000 (b)	=19 (c)	15 (0)	4.0	1.9		30				0.987 U	1.01 U	1.01 U	1.1 U	1.03 U	0.976 U
Phenol	110		204000 (8)	10200 (a)	2560 (a)	1,700,000							1 97 Ü	203 U	2.02 U	220	206 U	1.95 U
		ARTIMENT - ARREST MARTE																
EPA Method SW8270SIM	15		1800	19 (c)	45 (-)	3.0	19	15	3.0				NA	NA	NA	NA	NA	NA
Pentachlorophenol	15		1800	19 (6)	15 (c)	3.0	19	15	3.0	_			IVA	INA	INA	INA	INA	NA
PAHs (µg/L)								]										
EPA Method SW8270 - SIM								ĺ										
2-Methylnaphthalene Acenaphthene	620 520		284,000	1700 (a)	 520 (a)	990			990	-			0.05 U	NA 0.05 U	NA 0.0495 U	0.11 U 0.11 U	NA 0.0506-U	NA -0.05-U
Acenaphthylene	620 (b)	-	284,000	Trovia:	uzu (a)								0.05 U	0.05 U	0.0495 U	0.11 U	0.0506 U	0.05 U
Anthragene	13	· · · · · ·				40,000	KW III		40,000				0.05 ∪	0.05 U	0.0495 U	0.11 ⊍	- 0.0506 U	0.05 U
Benzo(a)anthracene	0.027					0.018			0.018	9.1			0.05 ∪	0.05 U	NA	0.11 U	0.0506 U	0.05 U
Benzo(a)pyrene	0.014		-	e de la	7	0.018	Stop A		0.018 0.018	0.59			0.05 U 0.05 U	0.05 U 0.05 U	0:0495 U 0:0495 U	0.11 L 0.11 U	0.05Q6 U 0.0506 U	0.05 U 0.05 U
Benzo(b)fluoranthene Benzo(g,h,i)perviene	6.16 (d)	-	-			0.018			0.018				0.05 U	0.05 U	0.0495 U	0.11 U	0.0506 U	0.05 U
Benzo(k)fluoranthene		-				0.018			0.018	-	THE RESIDENCE OF THE PERSON NAMED IN COLUMN		0.05 U	0.05 U	0.0495 U	0.11 U	0.0506 U	0.05 U
Chrysene						0.018			0.018				0.05 U	0.05 U	0.0495 U	0.11 U	0.050€ □	0.05 U
Dibenzofuran	3.7					140			-				NA 0.05 U	NA 0.05 U	NA 0.0495 U	0.11 U 0.11 U	NA 0.0506 U	NA 0.05 Ú
Eluoranthene Fluorene	6.18 3.9			3980 (a)		5300	====		140 UT				0.05 U	0.05 U	0.0495 U	0.11 U	0.0506 U	0.05 U
Indeno(1,2,3 cd)pyrene	0.9					0.018			0.018		ar ar 46° -		0.05 U	0.05 U	0.0495 U	0.11 U	0.0506 U	0.05 U
Naphthalene	620		284,000	2300 (a)	620 (a)					680			0.05 U	0.05 U	0.0495 U	0.11 U	0.0506 U	0.05 U
Phenanthrene	620 (b)		284000 (b)			4000			4000				0.05 U	0.05 U	0.0495 U 0.0495 U	0.11 U 0.11 U	0.0506 U 0.0506 U	0.05 U
Pyrene		-	-			4000		-	4000				0.05 U	0.05 U	0.0495 U	0.11 0	0.0506 0	0.05 U
VOLATILES (µg/L)																		
EPA Method SW8260																		
1,2,4-Trimethylbenzene	130(e) 130 (e)		200000 (e) 200000 (e)				-			1300 1400			1 U	1 U	1 U	1 U	1 UJ 1 UJ	1 U
1,3:5-Trimethylbenzene 4-isopropyltoluene	9.8 (f)	545 MG 460	104000 (f)										1 Ų	1 U	1 U	1 U	1 UJ	1 U
Benzene	130		200,000	5300 (a)	- B-766.96.7	51 (g)	*		51	1700	13,000		0.3 U	0.3 U	0.3 U			0.3 U
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100	-	-	29,000	110,000			1 U	1 U	1 U	1 U	1 UJ	1 U
Isopropylbenzene	130		200000 (e)							00000 (1)		8 / 12 / Sec. 10 / 1	4.0	1 ⊍ 2 U	1 U 2 U	10	2 UJ	t U
m,p-Xylene Methyl tert-Butyl Ether	13 (h)		8000 (h)	-						22000 (i) 31,000	550,000		2 U	10 1 U	20	1 U	2 03	2 U 1 U
n-Butylbenzene	130 (e)		200000 (e)					-					1 U	1 U	1 U	1 U	1 UJ	1 U
n-Propyiberizene	130 (e)		200000 (e)										10	1.0		10	1 03	14
Naphthalene	620		284,000	2300 (a)	620 (a)					680			1 U	1 U	1 U	5 U	1 UJ	1 U
o-Xylene	1.8		8000 (h) 200000 (e)							22000 (i)			1 U	1 U	1 U	1 U	1 UJ 1 UJ	1 U
sec-Butylbenzene tert-Butylbenzene	130 (e) 130 (e)		200000 (e)										10	THE U	- 10 du			
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000		***	1 Ū	1 U	1 U	1 U	1 UJ	1 U
I			1			l	1				ı	I						

7/19/05 \\Edmdata\wproc\231\009\132\Philli RI 071905\Philli RI Rpt\_App D Lower GW 1

													ВПЕ	BITE	втте	BTTF	and BITTE I I I I	BHF
							SCREENING CRIT	TEDIA										
	Oregon S	SLVs - Surta	ace Water	Oregon A	mbient Wate	r Quality Criteria		ommended Water	Quality Criteria	Risk-Based	Concentration		1					
Sample Identification:				1		Fish			1	Construction	Volatilization	Site-	LW29D	LW29D	LW29D	LW30D	LW30D	LW30D
Laboratory Identification:				Fresh	Fresh	Consumption	Fresh	Fresh	Organism	and Excavation		Specific	0406050-07	0408006-07	0411047-03	FZ04F	0402085-02	0406050-09
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	6/8/2004	8/2/2004	11/8/2004	10/27/2003	2/18/2004	6/8/2004
HYDROCARBONS (mg/L)				1					İ			ĺ						
NWTPH-HCID																		
Gasoline			<del></del>	l				-		12			NA	NA	NA	NA	NA	NA.
Diesel													NA NA	NA	. NA	NA NA	NA NA	NA NA
NWTPH-Dx									]									
TPH-Diesel Range													0.249 U	0.306	0.252 U	0.25 U	0.352	0.488
TPH-Motor Oil Range	,						A Appendi						0.497 U	0.476 L	J 0.503 U	05 U	0.493 U	0.517 U
NWTPH-G													1					
TPH-Gasoline Range									-	12			0.100 U	0.100 t	J 0.100 U	0.25 U	0.100 U	0.100 U
										]								
PRIORITY POLLUTANT								f										
METALS (mg/L)		40.13						0.45.00	0.0004460									
Arsenic (7060) Chromium (6010)	0.15 (j) (*) 0.011 (k)	18 (j)	6 25 (k)	0.34	0.15 0.065 (l)	0.00014 (g)(*) -3433	0.34 (*) 0.6 <b>7</b>	0.15 (*) 0.074	0.00014 (*)			1.5 0.005	0.00631 0.0164	0.00694	0.00658	0.01	0.0086	0.0146
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (I)		0.013	0.009				0.004	0.01 U	0.0151 0.01 L	0.0115	0.026	0.016	0.156
Lead (7421)	0.0025 (*)	28	323		0 0007 (1)(*)		0.065	0.0025 (5)				0.02	0.00132	0.000613	0.00274	0.008	0.00333	0.0292
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (1)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.005 L		0.03	0.005 U	0.0682
Zinc (6010).	0120	105	1230	C.1 (I)	0.1 (1)	26	0.12	0.12	26			0.015	0.0105	0:01 L	0.0216	0:07	0.0383	0.264
BETX (μg/L)				ŀ														
EPA Method SW8021B																		
Benzene	130		200000	5300 (a) 32000 (a)		51 (g)			51	1700	13000		NA NA	NA NA	NA	NA	NA	NA NA
Ethylbenzene Toluene	7.3 9.8		200000 (f) 104000	17500 (a)		2100 15,000			29,000 200.000	110,000 78,000	***	***	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Xvienes, Total			8000 (h):	17500 (a)		15,000			200,000	78,000				NA.		NA NA	NA NA	NA NA
Ayumes, rola	10 (11)		Outdown 19							£2,000			13/4	180			1 No. 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	190
DIOXIN/FURANS (ng/L)																		
EPA Method SW8290																		
Total TEQ						5.1E-06							NA	NA	NA	NA	NA	NA

Page 31 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													вше	BTTF	BITTE	Y, WBITES YES	S BITE O	SE SBITE SE	втт
							SCREENING CRI	TERIA											
	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Water	Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based	Concentration	I	1						
Sample Identification:	:					Fish				Construction	Volatilization	Site-	LW30D	FM30D	LW32D	LW32D	LW32D	LW32D	LW32D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0408020-05 8/3/2004	0411047-05 11/8/2004	FZ04I 10/27/2003	0402080-06 2/17/2004	0406050-05 6/8/2004	0408006-05 8/2/2004	0411052-04 11/9/2004
SEMIVOLATILES (µq/L)							i	<del>                                     </del>	<del>                                     </del>		<del>- 7</del>	i							
EPA Method SW8270													1						
2,4-Dimethylphenol	42			2120 (a)		850			850				2.98 U	2.99 U	3.2 U	2.9 U	3.04 U	3.03 U	2.93 U
2-Methylnaphthalene	620 (b)		284000 (b)				E 6 E. C F						0.992 U	0.997 U		0,965 U	1.01 U		
Acenaphthene	520			1700 (a)	520 (a)	990		-	990		***		0.992 U	0.997 U	1.1 U	0.965 U	1.01 U	1.01 U	
bis(2-Ethylhexyl)phthalate	3.0	8000	73000			2.2			2.2		24		1,73	2.04	2.2	2,51 U	2,21	2,01	1.05
Carbazole					trombildados popular france							errosteriosp	0.992 U	0.997 U	1. <b>1</b> U	0.965 U	1.01 U	1.01 U	
Dibenzofuran	3.7	200	0.000.000			4500			4500	100			0.992 ∪	0.997 U		0.965 U	1,01 U	101 U	
Di-n-Butylphthalate Fluorene	35 3.9	800	2,200,000	-		4500 5300			4500 5300				0.992 U 0.992 U	0.997 U 0.997 U	1.1 U	0.965 U 0.965 U	1.01 U 1.01 U	1.01 U	
Naphthalene	620		284.000	2300 (a)	620 (a)	0.00	-	<u> </u>		680			0.992 U	0.997 U	1.1 U	0.965 U	1.01 U	1.01 U	
Pentachlorophenol			1800	19 (c)	15 (c)	3.0	19	- 15	30				4.96 U	4,99 U	5.3 (7	4.83 U	5.06 ()		4.89 U
Phenanthrene	6.3		284000 (b)										0.992 U	0.997 U	1.1 U	0.965 U	1.01 U	1.01 U	
Phenol	110	61 (44 (63)	Y Table	10200 (a)	2560 (a)	1,700,000							1.98 U	1.99 U	2.1 U	1.93 U	2.02 U	2 02 U	= 1.96 U
ED 1 1 1 1 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2								İ											ľ
EPA Method SW8270SIM Pentachlorophenol	15		1800	10 (e)	15 (n)	3.0	19	15	3.0		***		NA	NA	NA	NA	NA	NA	NA
Femachiorophenoi	15	-	1600	19 (c)	15 (c)	3.0	19	13	3.0				INA	INA.	INA	INA	NA.	IVA	INA
PAHs (µg/L)																			
EPA Method SW8270 - SIM							i												
2-Methylnaphthalene	620	economic month manual	284,000		enter the minima is			and the contract of the contra	PROVINCE TRANSPORT OF THE				NA NA	NA NA	0.11 U	NA	NA	NA	NA
Acenaphthene	520			1790 (a)	520 (a)	990			990				0:05 U	0.05 U	0.11 U	0.0473 UJ	0.05 U		0 0498 ∪
Acenaphthylene	620 (b)		284,000	2		40,000		-	**				0.05 U = 0.05 U	0.05 U	0.11 U 0.11 U	0.0473 UJ 0.0473 UJ	0.05 U 0.05 U	0.05 U 0.05 U	0.0498 U 0.0498 U
Anthracene Benzo(a)anthracene	0.027		-			0.018			40,000 0.018	9.1			0.05 U	NA	0.11 U	0.0473 UJ	0.05 U	0.05 U	0.0438 G
Benzo(a)pyrene	0.027					0.018			0.018				0.05 U	0.05 U	0110				
Benzo(b)fluoranthene	6.16 (d)	-				0.018	**		0.018				0.05 U	0.05 U	0.11 U	0.0473 UJ	0.05 U	0.05 U	0.0498 U
Berizo(g.h,i)perylene						14							0.05 U	0.05 U	0.11 U	0.0473 UJ	- 0.05 U	0.05-0	0.0498 U
Benzo(k)fluoranthene						0.018			0.018	AND RESIDENCE OF SECTION			0.05 U	0.05 U	0.11 U	0.0473 UJ	0.05 U	0.05 U	0.0498 U
Chrysene						0.018			0.018				0.05.0	0.05 U	0.11 U	0.0473 UJ	0.05 ⊍	0.05 U	0.0498 U
Dibenzofuran	3.7							# 17 MS # 85 ST ME 13					NA 0.05 U	NA - 0.05 D	0.11 U 0.11 U	NA 0.0473 UJ	NA 0.05.U	NA 0.05 D	NA B 0 400 LL
Fluoranthene Fluorene	6.16 3.9			3980 (a)		140 5300			140 5300				0.05 U	0.05 U	0.11 U	0.0473 UJ	0.05 U	0.05 U	0.0498 U 0.0498 U
Indeno(1,2,3-cd)pyrene			P 0 5 4 3			0,018			0.018			78-7-27-6	5.05 U	0.05 U	0.11 U	0.0479 UJ		0.05 U	
Naphthalene	620		284,000	2300 (a)	620 (a)		 11,796, BENGER SAN CONTRACTOR	-		680			D.05 U	0.05 U	0.11 U	0.0473 UJ	0.05 U	0.07	0.0498 U
Phenanthrene	620 (b)		284000 (b)							- 65.2			0.05 Ú	0.05 U	0.11 U	0.0473 UJ	0.05.U	0.05 U	0 0498 U
Pyrene						4000			4000				0.05 U	0.05 U	0.11 U	0.0473 UJ	0.05 U	0.05 U	0.0498 U
VOLATUES (mill.)											j								
VOLATILES (μg/L) EPA Method SW8260									•										
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene			200000 (e)							1400		DESCRIPTION OF	1.0	1.0	1 U	1 J. J. U.	1.0	1.0	1-0
4-Isopropyltoluene	9.8 (f)		104000 (t)			-							1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	130		200,000	5300 (a)		51 (g)			51.1	1700	13,000		0310	0.3 U			. 0.3 U	0.3 U	
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100	CONTRACTOR STATE		29,000	110,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropybenzene	130		200000 (e)							22000 (i)			1 U 2 U	1.U. 2.U	1 U	1. <b>U</b> 2 U	2 U	1 Ü 2 U	1.0
m,p-Xylene Methyl len-Bulyl Ether	13 (h)		8000 (h)	Air a	-					22000 (i) 31,000	550,000		2 U	2 U	1 U	2 U	2 U		2 U
n-Butylbenzene	130 (e)		200000 (e)		_	400		There is the same of the same					1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	130 (e)		200000 (e)										- 1-0	- ij	1 Ú =	1 0	i u	1 U	A A SECURE AND A S
Naphthalene	620		284,000	2300 (a)	620 (a)				-	680			1 U	1 U	5 U	1 U	1 U	1 U	1 U
o-Xylene	1.8		8000 (h)	- :: A E.		- 40				22000 (i)			1 U		1 U	1 U		149	- 12x - 2x - 2x - 2x - 2x - 2x - 2x - 2x
sec-Butylbenzene	130 (e)		200000 (e)	CONSISSION PTR	in although or carrier						Maria de la companya de la companya de la companya de la companya de la companya de la companya de la companya	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
tert-Butylbenzene	manage of the second		200000 (e)						000.000	70.000		nn-	1.0	10	1.0	10%	1.U	10	ROLLLAND DRIENTS NUMBER
Toluene	9.8		104,000	17500 (a)	-	15,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U	1 U

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													BITTF	BTTF	BTTF	BTTF	ВПЕ	вттғ	BTIF
ı							SCREENING CRI	ERIA					<del>                                     </del>						
]	Oregon	SLVs - Surfa	ce Water	Oregon A	nbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria		Concentration		1						
Sample Identification:						Fish				Construction	Volatilization	Site-	LW30D	LW30D	LW32D	LW32D	LW32D	LW32D	LW32D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	0408020-05 8/3/2004	0411047-05 11/8/2004	FZ04I 10/27/2003	0402080-06 2/17/2004	0406050-05 6/8/2004	0408006-05 8/2/2004	0411052-04 11/9/2004
	Aquatic	Dilus	Widthitidis	Acute	CHIONIC	Only	CIVIC (ADDIE)	COO (GIRGING)	I	***OIKE	Occupational	Background	6/3/2004	170/2004	10/2/12003	2/17/2004	0/0/2004	6/2/2004	11/9/2004
HYDROCARBONS (mg/L)																			
NWTPH-HCID										1									
Gasoline						**				12			NA.	NA	NA	NA	NA NA	NA NA	NA
Diesel													NA	NA :	NA.	NA .	NA NA	- NA	NA .
NWTPH-Dx																			
TPH-Diesel Range		**											0.539	0.319	0.35	0.504	0.72	0.863	0.6
TPH-Motor Oil Range											Parlace		0.478 ⊔	0.525 U	0.5 U	0.491 U	0.559 U	0.496 U	0.501
NWTPH-G									ľ										
TPH-Gasoline Range		**							_	12			0.100 U	0.100 U	0.25 U	0.100 ↓	0.100 U	0.100 U	0.105
Ĭ										_		1							
PRIORITY POLLUTANT																			
METALS (mg/L)												1							
	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)	-		1.5	0.0128	0.0128	0.004	0.00939	0.00973	0.01	0.0104
Chrom/um (6010)	0.011 (k)		25 (k)	0.29 (I)		3433	0.57	0.074			# 1 m	0.005	0,005 U	0.0442	0.063	0.0202	0.0261	0.0183	0.0446
Copper (6010)	0.009	341	53	0.05 (l)	0.011 (l) 0.0007 (bt*)		0.013	0.009				0.004 0.02	0.01 U	0.0385	0.082	0.0109	0.01 U 6.00198	0.01 U	0.0305
Lead (7421) Nickel (6010)	0.0025 (*) 0.052	28 562	323 38	0.33 (l)	0.052 (1)	4.6	0.065	0.0025 (*) 0.052	4.6			0.02	0.00221 0.005 U	0.00785 0.005 U	0.018	0.00281 0.005 U	WARRANT CONTRACTOR OF THE PROPERTY OF	0.00195	0.00582
Zine (6010)	0.052	105	1230	0.33 (I)		4.6 26	0.47	0.052	4.6 26			0.015	0.005 0	0.005 0	0.146	0.0251	0.005 U 0.0189	0.005 U 0.0238	0.013 0.0734
500/190/01	Carried Control			SE-MENTERS	TORNAL MARKET	Maria Cara Cara Cara Cara Cara Cara Cara	W. 14	THE PART OF THE PA	The state of the s	1007100			0.0001	V.0750	V.110	9-94-V	Expense ANNIAN SE	0.0200	0.07.04
BETX (µg/L)																			
EPA Method SW8021B																			
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)		2100			29,000	110,000			NA .	NA .	NA.	NA	NA:		NA .
Toluene	9.8		104000	17500 (a)		15,000			200,000	78,000	Sales de la company		NA NA	NA	NA	NA	NA NA	NA	NA
Xylenes, Total	. 13 (h)		(r) 0008.							22,000			NA.	NA	NA	NA NA	, NA	NA .	NA NA
DIOXIN/FURANS (ng/L)						!				1	l								
EPA Method SW8290						J				J	ļ								
Total TEQ	~~					5.1E-06							NA	NA	NA	NA	NA	NA	NA
				•						•	ı	'					****	147	1471

Page 33 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													AR	AR	AR	AR.	AR
							SCREENING CRI	TERIA									
	Oregon S	SLVs - Surfa	ice Water	Oregon A	mbient Water	Quality Criteria		commended Water	Quality Criteria	Risk-Based (	Concentration		†				
Sample Identification:						Fish				Construction	Volatilization	Site-	LW10D	LW10D	LW10D	LW10D	LW10D
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	FY82B 10/23/2003	0402113-02 2/23/2004	0406073-02 6/10/2004	0408044-03 8/6/2004	0411051-03 11/9/2004
	- Again		Tract arterio	I	OTH OTHE	0.1.9	Unio (rissio)	- GGG (GIIIGIIIG)	1 0.1.9	T T T T T T T T T T T T T T T T T T T	Оссорилоны	Ducigiouna	1012012000	DEGREGOV	G TO/LOOT	GG12004	1110/2004
SEMIVOLATILES (µg/L) EPA Method SW8270				i					1								
2.4-Dimethylphenol	42			2120 (a)		850		_	850				3 U	3 U	3.21 U	3 (	2.96 ∪
2 Methylnaphthalene	620 (b)		284000 (b)										10			1.0	
Acenaphthene	520			1700 (a)	520 (a)	990			990				1 U	0.999 ∪	1.07 U	11	
bis(2-Ethylhexyl)phthalate	3:0	8000	73000			2.2			2.2				10	0.999 U	1.07 U		
Carbazole Dibenzofuran	3.7												1 U	0.999 U	1.07 U	1 L	
Di-n-Butylphthalate	35	800	2,200,000	-		4500		**	4500	EMEL METAL			1 U	0.999 U 0.999 U	1.07 U	1 L	
Filiorene	3:9					5300			5300				10	0 999 U			
Naphthalene	620		284,000	2300 (a)	620 (a)					680		***	1 U	0.999 U	1.07 U	1 (	
Pentachlorophenol			1800	19 (c)	15 (c)	3.0	19	15.	30	- A 155			5 Ü	, 5 U	5.35 U		
Phenanthrene Phenoi	6.3 110		284000 (b)	10200 (a)	need to	1,700,000							1 U	0.999 U 2 U	1.07 U 2.14 U	1 (	
- Helion	, and			- IUZUU (A):	1230VIII	1,700,000	2 No. of the Control		2 2 2						2.14.0	21	1.97.0
EPA Method SW8270SIM				ĺ													
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0		***		0.94	0.491 U	0.509 U	0.5 L	0.489 U
PAHs (µq/L)				1			1		1								İ
EPA Method SW8270 - SIM																	
2-Methylnaphthalene	620		284,000										NA	NA.	NA	NA	NA NA
Acenaphihene	520			1700 (a)	520 (a)	990			990				NA NA	NA NA	NA.	STATE OF STREET AND ADDRESS OF THE PARTY OF	NA:
Acenaphthylene Anthracene	620 (b)		284,000		-	= 40.000							NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA NA	NA NA	NA NA	NA NA	NA.
Benzo(a)pyrene	0.014					0.018			0.018	0.63		if the second	NA NA	NA NA		NA.	NA NA
Benzo(b)fluoranthene	6.16 (d)					0.018			0.018				NA	NA	NA	NA	NA
Benzo(g,h,i)perylene													NA	NA		NA	NA NA
Benzo(k)fluoranthene			-			0.018			0.018 0.018				NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene Dibenzofuran	3.7					0.010			0.016				NA	NA NA	NA NA	NA NA	NA NA
F coranthene	6.16			3980 (a)		140			140				NA.	NA.	NA NA	NA NA	NA
Fluorene	3.9	Name Tiller Call on the		**	THE SECOND CO.	5300			5300				NA	NA	NA	NA	NA
inderio(1,2,3±cd)pyrene						0.018		2 di # 9 5	0.018				- NA	NA .		NA.	- NA
Naphthalene Phenanthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)					680			NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	ozu (b)		2040/JU(U)	and lines of		4000			4000		et an Militaria		NA NA	NA NA	NA NA	NA NA	NA NA
·																	
VOLATILES (µg/L)												I					f
EPA Method SW8260 1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300	***		1 U	1 U	1 U	1 U	1 U
1,3,5 Trimethylbenzene	130(e)		200000 (e)							1400			10	1.0	1.0	U .	
4-Isopropytoluene	9.8 (f)		104000 (f)		##7 SHATES FAMILY TO			romer eral valor roman					1 U	1 U	1 U	1 U	AND ADDRESS OF THE PARTY OF THE
Benzene	130	<b>FB B3</b>	200;000	5300 (a)		Section Street Street Section Street		, U A	51	1700	13.000		1.0	0,4 U	0.3 U	0.3 U	
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000			1 U	1 U	1 U	1 U	1 U
isopropylbenzene m,p-Xylene	130 13 (h)		200000 (e) 8000 (h)							22000 (i)			1 U 1 U	1 U 2 U	1 U 2 U	1 U 2 U	1 Ú 2 U
Methyl tert-Butyl Ether	10 (11)		8000 (11)						· ·	31.000	550,000		NA 1	1 U	2 U	1.0	20
n-Butylbenzene	130 (e)	-	200000 (e)			-		-				22 11 12 12 13 14 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	130 (e)		200000 (e)										1.0		1.0	1 0	
Naphthalene	620		284,000	2300 (a)	620 (a)					680	Take I then I well to be the		5 U	1 U	1 U	1 U	1 U
o-Xylene sec-Butylbenzene	1.8 130 (e)		8000 (h) 200000 (e)				·-			22000 (j)			.1.U 1.U	1 U	1 U 1 U	1 U 1 U	1 U
tert-Butylbenzene	130 (e)		200000 (e)											1.U		10	1.0
Toluene	9.8		104,000	17500 (a)		15,000		-	200,000	78,000			1 U	1 U	1 U	1 U	1 U
i						. 1		i		-	I	1			_		- 1

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Page 34 of 40

													AR	AR	AB	AR	AR
Г							SCREENING CRIT	ERIA									
	Oregon 8	SLVs - Surfa	ce Water	Oregon A	mbient Wate	er Quality Criteria		ommended Water C	Quality Criteria	Risk-Based C	Concentration						
Sample Identification: Laboratory Identification: Date Çollected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Fish Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	Construction and Excavation Worker	Voiatilization to Outdoor Air Occupational	Site- Specific Background	LW10D FY82B 10/23/2003	LW10D 0402113-02 2/23/2004	LW10D 0406073-02 6/10/2004	LW10D 0408044-03 8/6/2004	LW10D 0411051-03 11/9/2004
HYDROCARBONS (mg/L)																	
NWTPH-HCID																	
Gasoline									-	12			NA	NA	NA	NA	NA
Diesel						-			ALKER FIRE		<b>建进</b>		NA	NA	NA	NA	NA .
NWTPH-Dx																	
TPH-Diesel Range													0.25 U	0.247 U		0.245 U	
TPH-Motor Oil Range													0.5 U	0.494 L	0:476 U	0.49 U	0.481 U
NWTPH-G										1							
TPH-Gasoline Range					**					12			NA	NA	NA	NA	NA
PRIORITY POLLUTANT										İ							I
METALS (mg/L)						į											
Arsenic (7060)	0.15 (j) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.024	0.0231	0.0186	0.0198	0.0168
Chromium (6010)	0.011 (k)		25 (k)	0.29 (ii)	0.065 (1)	3433	0.57	0.074				0.005	0.012	0,0114	0.0156	0.0185	0.0233
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (l)		0.013	0.009				0.004	0.011	0.01 U		0.01 U	0.01 U
	0.0025 (*)	28	323		-0.0007 (1)(*)		0.065	0:0025 (*)			图 [[[4]]]	0.02	0.003	0.000958	0.0001	0.00123	0.0021
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6 26			0.01	0.01 U	0.005 U	0.005 U	0.005 U	
Zinc (6010)	0.120	105	1230	0.1 (1)	0.1 (1)	26	0.12	0.12	26		and the second	0.015	0.024	0.01 U	0.01 U	0.01 U	0.0169
BETX (μg/L)																	
EPA Method SW8021B																	
Benzene	130 <b>7.3</b>	-	200000 200000 (f)	5300 (a)		51 (g) 2100			51 29.000	1700 110,000	13000		NA NA	NA NA	NA NA	NA NA	NA NA
Ethylbenzene Toluene	9.8		104000 (1)	32000 (a) 17500 (a)		15,000			29,000	78,000			NA NA	NA NA	NA NA	NA NA	NA NA
Xvienes, Total	9.6 13 (h)		8000 (n)	17500 (a)		13,000			200,000	22,000			NA NA	NA NA	NA NA	NA NA	NA NA
Consequent Constitution of Con	THE STATE OF THE S	PR TOUS MEN CONT.										**					
DIOXIN/FURANS (ng/L)							l										
EPA Method SW8290 Total TEQ				**		5.1E-06					***		NA	NA	NA	NA	NA

Page 35 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHII	PH II	PH II	PH II	PHIL	PHII
	Γ.						SCREENING CRI											
0. 1.4. 34. 4	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria		Concentration	211	1	20				
Sample Identification: Laboratory Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	B2 FY64E	B2 0402099-02	B2 0408019-03	J2 FY64!	J2 0402105-02	J2 0408019-05
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	GMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/20/2003	2/19/2004	8/3/2004	10/21/2003	2/20/2004	8/3/2004
SEMIVOLATILES (µg/L)																		
EPA Method SW8270				ŀ														
2,4-Dimethylphenol	42		-	2120 (a)		850	-		850				3 U	2.92 U	3.01 U			3.02 U
2-Methylnaphthallene Acenaphthene	620 (h) 520		284000 (b)	1700 (a)	520 (a)	990			990	i de la compania del compania de la compania del compania de la compania del la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania del la compania de la			1 U	0 973 U 0.973 U	1 U 1 U			1.01 U 1.01 U
bis(2-Ethylnexyl)phthalate	3.0	8000	73000			gi - opidij ilancirini rangai i pagisa isandi			2.2		da da bi wa y		10	0.273 U	10			
Carbazole	-								-				1 U	0.973 U	1 U	1 U	0.993 U	1.01 U
Dipenzoluran	3.7						100						1.0		1.U			
Di-n-Butylphthalate Fluorene	35 3.9	800	2,200,000		-	4500 5300			4500 5300				1 U	0.973 U 0.973 U	1 U		0.993 U 0.993 U	1.01 U 1.01 U
Naphthalene	620	**	284,000	2300 (a)	620 (a)	9300	-			680			1 U	0.973 U	1 U		0.993 U	1.01 U
Pentachigrophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				5 U	4.86 Ü	5.02 U	5 U	4.97 U	
Phenanthrene	6.3		284000 (b)								TARREST TOP TO THE PERSON OF T		1 U	0.973 U	1 U	1 U	0.993 U	1.01 U
Phenol	-110			10200 (a)	2560 (a)	1,700,000							2 U	1.95 U	2.01 U	2 U	1.99 U	2010
EPA Method SW8270SIM																		
Pentachiorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				0.5 U	0.475 U	0.5 U	0.5 U	0.483 U	0.5 U
PAHs (µg/L)																		
EPA Method SW8270 - SIM										l								
2-Methylnaphthalene	620	**	284,000										NA	NA	NA	NA	NA	NA
Acenaphthene	520		284.000	1700 (a)	520 (a)	990			990		285		NA NA	NA -/	NA		NA NA	NA:
Acenaphthylene Anthracene	620 (b) -13	12.62				40,000			40,000				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	0.027			15.00° C.00°		0.018			0.018	9.1	***		NA	NA	NA	NA	NA	NA NA
Bonzo(a)pyrene	0.014					0.018	4		- 0.016	0.53			NA	NA .	NA NA	NA.	NA NA	NA.
Benzo(b)fluoranthene	6.16 (d)					0.018		-	0.018				NA NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(g,k,i)perviene Benzo(k)fluoranthene						0.018			0.018	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene								7.	0.018		yes		NA	NA NA		NA NA	NA_	NA
Dibenzofuran	3.7	 ec.com/sccon/com/	-			-							NA	NA	NA	NA	NA	NA
Eluoranthone	6.16 3.9			3980 (a)		140 5300			140 5300			444	NA NA	NA NA	NA NA	NA NA	NA NA	NA.
Fluorene Indeno(1,2,3-cd)pyrene	3.9					0.018			0.018				NA NA	NA NA	NA NA	NA S	NA NA	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)			**		680			NA	NA	NA	NA	NA	NA
Phenanthrene	620 (b)		284000 (b)										NA .	NA	NA.	NA	NA	NA .
Pyrene	-		-	-		4000			4000				NA	NA	NA	NA	NA	NA
VOLATILES (μg/L)											ĺ							
EPA Method SW8260												ĺ						
1,2,4-Trimethylbenzene	130(e) 130 (e)	-	200000 (e)	-						1300			1 U	1 U	1 U	1 U	1 U	1 U
4-Isopropyltoluene	9.8 (f)	-	200000 (e) 104000 (f)					- 199 at 191, 201					1 U	1 U	1 U	1 U	1 U	1 U
Benzene	130		200,000	5300 (a)		51 (g)			51	1700	13,000		i di di-	0:4 U	0.3 U	i i i i	54 U	
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000			1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	130		200000 (e)			-				22000 (i)			1U 1U	1 U 2 U	1.U. 2.U	1 U 1 U		1 U
m,p-Xylene Methyl tert-Butyl Ether	13 (h)		8000 (h)	-		-				22000 (I) 31,000	550,000		1 U NA	2 U	2 U		2 U 1 U	2 U
n-Butylbenzene	130 (e)		200000 (e)						-				1 U	1 U	1 U	1 U	1 U	1 U
r-Propybenzene	130 (e)	125	200000 (e)							7		46.40	10	3.0	18 1 U	1.0	1 V	10
Naphthalene	620	-	284,000	2300 (a)	620 (a)	101 320 - 251 - 257 - 257 - 2				680			5 U	1 U	1 U	5 U	1 U	1 U
o-Xylene sec-Butylbenzene	1.8 130 (e)		8000 (h) 200000 (e)							22000 (i)			1 U . 1 U	1 U	1 U 1 U	1 U 1 U	1 U 1 U	1 U
tert-Butylbenzene	130 (e)		200000 (e)		F SHIFTEN								10		10	10	10	
Toluene	9.8		104,000	17500 (a)		15,000			200,000	78,000		w 2/0- (Tab) (Ma) (Ma) (Ma)	1 U	1 U	1 U	1 U	1 U	1 U
I			ı				ı		,			l l						

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Page 36 of 40

## BZTO104(e)023588

													PHIL	PH II	PH (C. S.	PHII	PH II	PHII 100 M
							SCREENING CRIT	ERIA										
	Oregon S	SLVs - Surfa	ice Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria	Risk-Based C								
Sample Identification:				l		Fish				Construction	Volatilization	Site-	B2	B2	B2	J2	J2	J2
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific Background	FY64E 10/20/2003	0402099-02 2/19/2004	0408019-03 8/3/2004	FY64I 10/21/2003	0402105-02 2/20/2004	0408019-05 8/3/2004
	Aquanc	Dilus	ivialificials	Acute	CIIIOIIC	Only	CINC (Acute)	COS (GRIOTIL)	l Only	Worker	Occupational	Background	10/20/2003	2/19/2004	0/3/2004	10/21/2003	2/20/2004	0/3/2004
HYDROCARBONS (mg/L)																		
NWTPH-HCID				l					i									
Gasoline		a. D. mar annytanness					TMTH: TMENT IS NOT LIKE AND LI	Terminal in Control of		12	and the second second second		NA	NA	NA	NA	NA	NA
Diesel							1				Company of the		. NA	NA .	NA:	NA.	NA .	NA
NWTPH-Dx				ļ														
TPH-Diesel Range	Extelliging Leading Leading	daniya karangan kar							-		CORNER SERVICION CONTRACTOR		NA	NA	NA NA	NANA	NA NA	NA
TPH Motor Oil Flange			(d. )	100							AP		NA.	- NA	NA NA	NA NA	NA NA	, NA
NWTPH-G				1						l								
TPH-Gasoline Range										12			NA	NA	NA	NA	NA	NA
PRIORITY POLLUTANT																		
METALS (mg/L)																		
Arsenic (7060)	0.15 (i) (*)	18 (j)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.002	0.00507	0.00363	0.004	0.00766	0.0108
Chromium (6010)	0.011 (k)		25 (k)	0.29 (I)	0.065 (I)	3433	0.57	0.074				0.005	0.005 Ü	0.0087	0.0161	0.005 U	0.005 U	0:005 U
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)	er mandet i vink lastic at vicin	0.013	0.009	NO POST DER CHER VERN DER	AL COMMENTAL SALES		0.004	0.002 U	0.01 U		0.004	0.01 U	0.01 U
Lead (7421)	0 0025 (*)	28	323		0 0007 (1)(*)	MARKET !	0.065	0.0025 (*)				0.02	0.001 U				0.000156	0,000186
Nickel (6010) Zinc (6010)	0.052	562 105	38 1230	0.33 (l) <b>0.1 (l)</b>	0.052 (I) 0.1 (I)	4.6 26	0.47 0.12	0.052	4.6 -26			0.01 0.015	0.01 U 0.006 U	0.005 U 0.01: U		0.01 U 0.006	0.005 U 0.01 U	0.005 U 0.021
ZIFC (6510)	11-120	105	1200	0.1(1)	ULO	20	0.12	U-1/2	20	27 167 167		0.015	U.006 U	9,01 0	ou u	0,006	0.01 0	0.021
BETX (μg/L)																		
EPA Method SW8021B																		
Benzene	130	CHOCK MANY MAY	200000	5300 (a)		51 (g)			51	1700	13000	eta aktoriako irak zuakoba	NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3		200000 (f)	32000 (a)					29,000	110,000			-NA		NA .	NA	AV.	NA.L
Toluene Xyenes, Total	9.8 13 (h)		104000 8000 (h)	17500 (a)	 	15,000	Married to the street		200,000	78,000 22,000			NA NA	NA.	NA NA	NA NA	NA NA	NA NA
EXVIDITES CITIENT	(A) or		ovuu (n) o							ec. (UU)			THE NAME OF	NA	NA	NA.	NA _	NA.
DIOXIN/FURANS (ng/L)						İ						1						
EPA Method SW8290																		
Total TEQ						5.1E-06				-			NA	NA	NA	NA	NA	NA

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													PH II	PHIL	C PHILE S	PHII	PH:II	PHILIP
							SCREENING CRI	TERIA										
	Oregon SL	.Vs - Surfa	e Water	Oregon Ar	nbient Water	Quality Criteria	National Rec	commended Water	Quality Criteria		Concentration	Ţ	1					
Sample Identification: Laboratory Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh	Organism	Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW1D FY64K	LW3D FY82I	LW3D 0402113-10	LW3D 0408044-01	LW11D FY82J	LW11D 0402113-11
Date Collected:	Aquatic	Birds	Mammals	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	Worker	Occupational	Background	10/21/2003	10/24/2003	2/23/2004	8/6/2004	10/24/2003	2/23/2004
SEMIVOLATILES (µq/L)	1						T	1								<u> </u>		
EPA Method SW8270	1																	
2,4-Dimethylphenol	42			2120 (a)		850	-		850				3 U	3.3 U	2.96 U	3 U	3.3 U	2.93 U
2-Methylnaphthalene	620 (b)		284000 (b)		746							新 新 典 新 新	10	1.1.0	0.985 U	10	1.1 U	0.976 Ú
Acenaphthene	520			1700 (a)	520 (a)	990		-	990		Software Committee	STREET TRANSPORTED THE LIST COM-	1 U	1.1 U	0.985 ∪	1 U	1.1 U	0.976 U
bis(2 Ethylhexyl)phthalate Carbazole	9.0	8000	73000			2.2			2.2			# 15 to 15 t	1 U 1 U	11 U 1.1 U	0.985 U 0.985 U	1 U 1 U	1.5 1.1 U	<b>1.86</b> 0.976 U
Dibenzofuran	3.7							****					i ü.	1.10	0.985 U		1.1.0	0.976 U
Di-n-Bulylphthalate	35	800	2,200,000		**	4500			4500		The control of the co		1 U	1.1 U	0.985 U	1 U	1.1 U	0.976 U
Emorene	3.9					5300		- 14	5300				1-0	1,1 0	0.985 U	1 U	1 - 25 - 11.15U	TO ARMAN DE LA TIME DE LA TIME DE LA TIME DE LA TIME DE LA TIME DE LA TIME DE LA TIME DE LA TIME DE LA TIME DE
Naphthalene	620		284,000	2300 (a)	620 (a)	3.0	-			680			1 U	1.1 U	0.985 U	1 U	1.1 U	0.976 U
Pentachlorophenol Phenanthrene	6.3		1800 284000 (b)	19 (c)	_ 15 (c)	3.0	19	15	3.0			**	5-U 1 U	5.5 U 1.1 U	4.93 U 0.985 U	5 U 1 U	5.5 U 1.1 U	<b>4.88 U</b> 0.976 U
Phenol	110		204000 (D)	10200 (a)	2560 (a)	1,700,000	and the second						2.0	2.2 U	0.985 U	20		
		and the second	Sec. 1976 P. Selfenderine		and the same of the same of	-200	The state of the s	W			-constitution and the second		- Cart -					
EPA Method SW8270SIM																		
Pentachlorophenol	15		1800	19 (c)	15 (c)	3.0	19	15	3.0	-			0.5 U	0.62	0.489 ∪	0.5 U	0.55 U	1.5
PAHs (µg/L)												1						
EPA Method SW8270 - SIM							1											
2-Methylnaphthalene	620		284,000							-			NA	NA NA	NA NA	NA NA	NA	NA
Acenaphthene	-520		004.000	1700 (a).	520 (a)	990			990		**		NA - ;	NA	NA NA	NA.	. NA	NA
Acenaphthylene Anthraceue	620 (b)		284,000	F-101 F-10		40,000			40,000				NA NA	NA NA::	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA.	NA	NA.	NA NA	NA	NA
Benzo(a)pyrene	0,014					0.018			0.018	0.53	4.		NA	- NA	NA.			
Benzo(b)fluoranthene	6.16 (d)				terminate for the second	0.018	77847756		0.018				NA	NA	NA	NA	NA	NA
Benzo(g.h.i)perylene											THE REST. CO., CO., LANSING.		NA .	NA	NA	- NA	NA II	NA NA
Benzo(k)fluoranthene Chrysene						0.018 0.018	60/45 m		0.018	-			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenzofuran	3.7												NA NA	NA	NA NA	NA NA	NA.	NA NA
Pluoranthene	6.16			3980 (a)		140			140				NA .	NA NA				
Fluorene	3.9					5300	-		5300	and a feet of the same of the			NA	NA	NA	NA	NA_	NA
Indeno(1,2,3-cd)pyrene						0.018			0.018				NA.	NA.	NA	NA NA	NA -	NA.
Naphthalene Phenauthrene	620 620 (b)		284,000 284000 (b)	2300 (a)	620 (a)					680			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene			-20HOVU (U) -1			4000			4000		- (B)		NA NA	NA	NA NA	NA NA	NA	NA NA
								i										
VOLATILES (µg/L) EPA Method SW8260												1						
1,2,4-Trimethylbenzene	130(e)		200000 (e)							1300			1 U	1 U	1 U	1 U	1 U	1 U
1,3,5. Erimethy benzene	130 (e)		200000 (e)							1400			10	1.0	i ü		1.0	10
4-Isopropyitoluene	9.8 (f)		104000 (f)					CONSIGNATION CONTRACTOR					1 U	1 U	1 U	1 U	1 U	1 U
Benzene	_ = 130-		200,000	5300 (a)		. 51 (g)			51	1700	13,000		1 U	1.0	0.4 U		10	0.4 U
Ethylbenzene	7.3	CONTRACTOR OF THE PARTY OF THE	200000 (e)	32000 (a)		2100		SMS Williams	29,000	110,000			1 U	1 U	1 U	1 U	1 U	1 U
isopropylbenzene m,p-Xylene	130 13 (h)		200000 (e) 8000 (h)				-	*	2.0	22000 (i)			1 W 1 U	- 1U	1 U 2 U	1 U 2 U	1 U 1 U	1 U 2 U
Methyl tert-Butyl Ether			0000 (ii)							31,000	550,000		NA NA	NA NA	2 U	2 U	NA NA	10
n-Butylbenzene	130 (e)		200000 (e)										1 U	1 U	1 ∪	1 U	1 U	1 U
n-Propylbenzene	130 (e)		200000 (e)								W # 1		1.0		1.0	1.U.		AND AND THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF T
Naphthalene	620		284,000	2300 (a)	620 (a)					680			5 U	5 U	1 U	1 U	5 U	1 U
o-Xylene sec-Butvlbenzene	1.8 130 (e)		5000 (h) 200000 (e)							22000 (i)		A-14-51	1 U	1 U	1 U	1.0 1.0	- 010	1.0
tert Butvibenzene	130 (e) 130 (e)		200000 (e) 200000 (e)										1 U	1.0	-automatureer/pressoner/des		1 U	1 U
Toluene	9.8	**	104,000	17500 (a)		15,000			200,000	78,000			1 U	1 U	1 U	1 U	1 U	1 U
I						· I	i				I	- 1		. •				

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													PHIIITEE	C PHIFTS	- 15 <b>PH</b> (Feb. 2)	PH II	PHII	PHII
		·····					SCREENING CRI	TERIA			·		-					
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based C	Concentration		1					
Sample Identification:				Ì		Fish				Construction	Volatilization	Site-	LW1D	LW3D	LW3D	LW3D	LW11D	LW11D
Laboratory Identification: Date Collected:	A	Dist		Fresh	Fresh Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific	FY64K	FY82I	0402113-10 2/23/2004	0408044-01	FY82J	0402113-11
Date Collected:	Aquatic	Birds	Mammais	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Only	worker	Occupational	Background	10/21/2003	10/24/2003	2/23/2004	8/6/2004	10/24/2003	2/23/2004
HYDROCARBONS (mg/L)																		
NWTPH-HCID																		
Gasoline										12			NA.	NA	NA	NA	NA	NA
Diesef												200	NA.	. NA	NA.	NA.	NA NA	NA
NWTPH-Dx										ĺ								
TPH-Diesel Range		-				TO AND THE PART AND OWNER WHEELS							NA NA	NA.	NA	NANA	0.66	0.562
TPH-Motor Oil Range								213.4					NA	NA NA	NA NA	, NA-	0,5 U	0.504 U
NWTPH-G																		
TPH-Gasoline Range								-		12			NA.	NA	NA	NA	NA	NA
DDIODEN BOLLUTANE																		
PRIORITY POLLUTANT METALS (mg/L)				1														
Arsenic (7060)	0.15 (j) (*)	18 (i)	6	0.34	0.15	0.00014 (g)(*)	0.34 (*)	0.15 (*)	0.00014 (*)			1.5	0.006	0.018	0.0138	0.014	0.005	0.00658
Chromium (6010)	0.011 (k)		25 (k)	0.29 (i)	0.065 (i)	3433	0.57	0.074	i i i i i i i i i i i i i i i i i i i	100 4 7 10		0,005	0.005	0.006	0.006	0.009.0	0.016	0.0104
Copper (6010)	0.009	341	53	0.05 (1)	0.011 (l)		0.013	0.009				0.004	0.005	0.004	0.01 U	0.01 U	0.015	0.01 U
Lead (7421)	0.0025 (*)	-28	323		0.0007 (I)(*)		0.065	0.0025 (*)			54	0,02	0.036	0,001	0.000558	0.000392	0.004	0.00188
Nickel (6010)	0.052 0.120	562	38 1230	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6 26			0.01	0.01 U	0.01 U	0.005 U	0.005 U	0.02	0.005 U
Znc.(6010)	U-150	105	1230	0.1(1)	0.1 (1)	26	0.12	0.12	20			0.015	0,019	Q.013	0.01 U	0,01, U	0.041	0.01 U
BETX (µg/L)																		
EPA Method SW8021B																		
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA NA	NA	NA	NA
Ethylbonzene	AND CONTRACTOR OF THE PROPERTY		200000 (f)	32000 (a)		2100			29,000	110,000			NA NA	NA NA	NA NA	NA NA	NA	NA NA
Toluene	9.8 13.(h)		104000 8000.(m)	17500 (a)		15,000			200,000	78,000 	V-1		NA NA	NA NA	NA NA	NA NA	NA NA	NA
Xylenes, Total	13 (1)		ann (u)							KK,000			NA.	NA	NA.	A STATE OF THE STA	NA	NA
DIOXIN/FURANS (ng/L)												ſ						
EPA Method SW8290										!								
Total TEQ			**		-	5.1E-06	-						NA	NA	NA	NA	NA	NA

Page 39 of 40

### TABLE D-2 SUMMARY OF DETECTED ANALYTICAL RESULTS LOWER ZONE GROUNDWATER SAMPLES PHASE III RI

													PHIL	PHIR	PHI	PH (I	PHII	PHII
I							SCREENING CRI	TERIA										
j	Oregon	SLVs - Surf	ace Water	Oregon A	mbient Water	r Quality Criteria	National Rec	ommended Water	Quality Criteria	Risk-Based (			1					
Sample Identification:				Fresh	Fresh	Fish Consumption	Fresh	Fresh		Construction and Excavation	Volatilization to Outdoor Air	Site- Specific	LW11D 0408044-02	LW11D 0411066-08	OX8D FY72F	OX8D 0402086-05	OX8D 0408026-10	OX8D 0411066-07
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammais	Acute	Chronic	Only	CMC (Acute)	CCC (Chronic)	Organism Only	Worker	Occupational	Background	8/6/2004	11/11/2004	10/22/2003	2/18/2004	8/4/2004	11/11/2004
	Ачань	Diida	Walling	/ icuit	Ontonio	Olay	Cinio (ribele)	000 (01101110)	1 01.0	T	Оббаралона	Lucinground	0.0.00					7777782001
SEMIVOLATILES (µg/L)									Į.									
EPA Method SW8270 2,4-Dimethylphenol	42			0400 (-)		850		1	850				3	2.97 U	NA	NA	3 U	2.87 U
2.Methylpaphthalene			264000 (b)	2120 (a)		850		100 00 20 00	850				1		NA NA	NA NA	3 U	DESCRIPTION OF THE PARTY OF THE
Acenaphthene	520	TREADER TO AND THE OWN	204000 (0)	1700 (a)	520 (a)	990			990		***************************************		1 L		NA NA	NA NA	1 U	
bis(2-EthVhexyl)phthalate		8000	73000	1700 (4)		2.2		15 50 20 50	2.2				1.71	1.17	NA .	NA.	4 47 U	
Carbazole	teres research control of the control			-									1 U		NA	NA	1 U	
Dibenzofuran	3.7				<b>用</b> 多		- 1 - 1 A				11-11	-	- 1 U		NA NA	NA :	10	
Di-n-Butylphthalate	35	800	2,200,000			4500			4500	 			1 U		NA	NA	1 U	
Fluorene	3.9					5300		-	5300				1.0			NA NA		
Naphthalene	620		284,000	2300 (a)	620 (a)	3.0	-	-	-	680			1 U		NA NA	NA NA	1 U	
Pentachlorophenol Phenanthrene	15 6.3		1800 284000 (b)	(19 (d)	15 (c)		19	15	3.0				1 1 0		NA NA	NA.	1 U	
Phenol	payment and the same and		264000 (0)	10200 (a)	2560 (a)	1.700,000						2.0	e e e		NA	NA.	20	
	AND STREET		1884 - (175 Hz.) (1805) (1865)	E Secondario		The second second			A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF T			THE RESERVE OF THE PARTY OF THE		The state of the s				- The same of the
EPA Method SW8270SIM							1	1		ĺ								
Pentachlorophenel	15		1800	19 (c)	15 (c)	3.0	19	15	3.0				0.5 U	NA	0.62	1.31	NA	NA
DAU- (:-#)				ł														
PAHs (μg/L) EPA Method SW8270 - SIM																		
2-Methylnaphthalene	620		284,000				_						NA.	NA	NA	NA	NA	NA
Acenaphthene	520		204,000	1700 (a)	520 (a)	990	2000		990		2,440		NA.	NA.	NA.	NA NA	NA NA	NA
Acenaphthylene	620 (b)		284,000				SD/stoker/asterbase	_		-		***	NA	NA	NA	NA	NA	NA
Anthracena	13					40,000			40,000				- NA	NA	NA .	NΛ	NA NA	NA NA
Benzo(a)anthracene	0.027					0.018			0.018	9.1			NA NA	NA NA	NA	NA	NA	NA
Benzo(s)pyrene			and the second		en A	0.018		1,50	0.018	0.53		Z-30-	NA.	NA .	NA .	NA	NA NA	NA .
Benzo(b)fluoranthene	6.16 (d)	 				0.01B			0.018		CONSTRUCTOR STREET		. NA	NA NA	NA NA	NA	NA	NA NA
Benzo(g.h.i)perylene								Brance Color	0.018			a. rando,	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene Chrysene					-	0.018			0.018				NA.	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenzofuran	3.7							- Ann - Santa Anna Anna Anna Anna Anna Anna Anna					NA.	NA	NA	NA	NA NA	NA.
Fluoranthene	6.16			3980 (a)		140	30.00		140				NA.	NA S	NA.	, NA	NA I	NA NA
Fluorene	3.9	**				5300	**		5300				NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene					**:	0.018			0.019	-			NA NA	NA.	NA	NA	NA	NA NA
Naphthalene	620		284,000	2300 (a)	620 (a)	Marie and Colored Transport	-	ATTEMBET - TONG ATTEMP ATTEMP - COST		680	er over over	ACTORNOL AND TO A STREET WATER	NA	NA	NA	NA	NA	NA
Phenanthrene	= 620 (b)		284000 (b)		-11.61								NA	NA	CANADA SELECTION SERVICES	NA:		NA
Pyrene	-	-			-	4000			4000				NA	NA	NA	NA	NA	NA
VOLATILES (µg/L)																		
EPA Method SW8260												İ						
1,2,4-Trimethylbenzene	130(e)		200000 (e)					-		1300			1 U	1 U	NA	NA.	2.49 J	4.05
1,3,6 Trimethylbenzene	130 (e)		200000 (a)			1124				1400			10		· ::::NA	NA NA	10	1.0
4-Isopropyltoluene	9.8 (f)		104000 (f)	THE AMERICAN STREET, SANSON			TANK DEL MELON COLUMN						1 U	1 U	NA	NA NA	1 U	1 U
Benzene	130		200,000						51		13,000		03 U		NA	NA .	0.9 U	
Ethylbenzene	7.3		200000 (e)	32000 (a)		2100			29,000	110,000			1 U	1 U 1 U	NA NA	NA NA	1 U	1 U
(sopropylbenzene	130		200000 (e)	<b>-</b>			100			22000 (i)			1 U 2 U	1 U	NA NA	NA NA	1 U 2 U	1,1 2 U
m.p-Xylene MethyPtert-Butyl Ether	13 (h)		8000 (h)	-						22000 (I) 31,000	550,000		2 U		NA NA	NA NA	10	
n-Butylbenzene	130 (e)		200000 (e)							31,000			1 U	1 U	NA	NA NA	1 U	1 U I
n-Bropylbenzene	130 (e)		200000 (e)			10.00		14				Selection of	1 0	'nŬ	NA NA	NA L	7 U	iŭ
Naphthalene	620		284,000	2300 (a)	620 (a)	**	-	-		680			1 U	1 U	NA	NA	1 ∪	1 U
o Xylene	1.8		8000 (h)							22000 (i)			# 1,U		NA	AM	10	-1.0
sec-Butylbenzene	130 (e)		200000 (e)				-		1 100 100 000 000				1 U	1 U	NA	NA	1 U	1 U
ferf-Butylbenzene													. Ju			NA	U	
Toluene	9.8		104,000	17500 (a)	**	15,000			200,000	78,000	[		1 U	1 U	NA	NA	1 U	1 U
									•									

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													PHIII	PHII	PH II	PHII	PHIL 101	PHII
Г					• • • • • • • • • • • • • • • • • • • •		SCREENING CRIT	TERIA					<del> </del>					
	Oregon	SLVs - Surfa	ce Water	Oregon A	mbient Wate	r Quality Criteria	National Rec	ommended Water (	Quality Criteria		Concentration		1					
Sample Identification:				١	Fresh	Fish				Construction	Volatilization	Site- Specific	LW11D	LW11D	OX8D	OX8D	OX8D	OBXO
Laboratory Identification: Date Collected:	Aquatic	Birds	Mammals	Fresh Acute	Fresn Chronic	Consumption Only	Fresh CMC (Acute)	Fresh CCC (Chronic)	Organism Only	and Excavation Worker	to Outdoor Air Occupational	Specific	0408044-02 8/6/2004	0411066-08 11/11/2004	FY72F 10/22/2003	0402086-05 2/18/2004	0408026-10 8/4/2004	0411066-07 11/11/2004
HYDROCARBONS (mg/L)																		
NWTPH-HCID																		
Gasoline										12			NA.	NA	NA	NA	NA	NA
Diesel														NA NA	NA.	NA NA	NA NA	NA.
NWTPH-Dx																		
TPH-Diesel Range													0.79	NA	NA	NA	NA	NA
TPH Motor Oil Range													0.51 L	NA I	. NA	NA.	NA .	NA NA
NWTPH-G																		
TPH-Gasoline Range			**		**					12			NA	NA	NA	N.A.	NA	NA
İ																		
PRIORITY POLLUTANT				1														
METALS (mg/L) Arsenic (7060)	0.45 (0.49)	18 (j)		0.34	0.15	0.00044 (=\(4\)	0.34 (*)	0.15 (*)	0.00014 (*)	İ		1.5	0.00558	0.00441	NA	NA	0.0224	0.0045
Chromium (6010)	0.15 (j) (*) 0.011 (k)	18 (J)	25 (k)	0.29 (I)	0.065 (1)	0.00014 (g)(*) 3433	0.34()	0.15()	0.00014()			0.005	0.00558	0.00441	, NA	NA NA	0.0224	0.0246
Copper (6010)	0.009	341	53	0.05 (I)	0.011 (I)		0,013	0.009				0.004	0.01 U	0.01 U	NA NA	NA NA	0.0201 0.01 U	0.0183
Lead (7421)	0.0025 (*)	28	323	0.043 (f)	0.0007 (I)(*)		0.065	0:0025 (*)				0.02	0.00274	0.00301	NA L	NA -	0.00274	0.00723
Nickel (6010)	0.052	562	38	0.33 (I)	0.052 (I)	4.6	0.47	0.052	4.6			0.01	0.005 U	0.005 U	NA	NA	0.005 U	0.005 U
Zinc (6010)	0.120	105	1230	0.1 (I)	0.1 (I)	26	0.12	0.12	26			0.015	0.0216	0.0246	. NA	- NA	0.0238	0.034
BETX (μg/L)																		
EPA Method SW8021B												i						
Benzene	130		200000	5300 (a)		51 (g)			51	1700	13000		NA	NA	NA	NA	NA	NA
Ethylbenzene	7.3	-	200000 (1)	32000 (a)		2100			29,000	110,000			NA NA	NA NA	NA NA	NA .	NA.	NA in
Toluene	9.8	-	104000	17500 (a)	**************************************	15,000			200,000	78,000			NA_	NA	NA	NA	NA	NA
Xylenes, Total	13 (h)		8000 (n)	· 数 使 · 多。						22,000			NA	NA	NA	NA .	NA NA	NA NA
DIOXIN/FURANS (ng/L)										İ								
EPA Method SW8290																		
Total TEQ						5.1E-06		-					NA	NA	NA	NA	NA	NA

### TABLE D-3 SUMMARY OF DETECTED ANALYTICAL RESULTS GROUNDWATER FOOTNOTES TIME OIL NORTHWEST TERMINAL

J	= Indicates compound	was analyzed fo	r but was not	detected at the	reported sample	detection limit

- UJ = Data validation flag indicating the analyte was not detected in the sample; the reported sample detection limit is an estimate.
- J = Data validation flag indicating the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- (\*) Preliminary screening level less than site-specific background.
- (\*\*) The NWTPH-HCID analysis of sample GW9-4 indicated the presence of diesel; however, due to laboratory error no NWTPH-Dx analysis was performed to quantify the diesel concentration.

NA= Not analyzed.

Bold indicates value is a detected constituent.

Box indicates value exceeds one or more screening criteria.

- (a) Insufficient data to develop criteria; value presented is the Lower Observed Effect Level (L.O.E.L.)
- (b) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the noncarcinogenic PAH with the lowest risk-based concentration (naphthalene) was used for the comparison.
- (c) pH dependent criteria (7.8 pH is used).
- (d) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (fluoranthene) was used for the comparison.
- (e) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (benzene) was used for the comparison.
- (f) Risk-based concentration not available due to lack of toxicity data; therefore, the risk-based concentration for the structurally similar compound and mode of toxic action (toluene) was used for the comparison.
- (g) Human health risk criteria for carcinogens reported for three risk levels. Value presented is the 10<sup>16</sup> risk level, which means the probability of one concern case per million people at the stated concentration.
- (h) Value shown is for total xylenes.
- (i) Hardness dependent criteria (100 mg/L used).
- (j) SLVs shown are for Arsenic III.
- (k) SLVs shown are for Chromium III.

### Phase III RI Soil Data Tables – September 2003 - November 2004

### Page: 1 of 11 Date: 04/29/2004

### TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

Soil

			1				Marie de la Companya		: %
CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft).	G07-3 G7-3(0-0.5) 09/29/2003 0.50		G07-4 G7-4(0-0.5) 09/29/2003 0:50	G07-5 G7-5(0-0.5) 09/29/2003 0.50	G10-4 G10-4(0-0.5) 09/29/2003 0.50	G10-4 G10-4(1.0-1.5) 09/29/2003 1.50	G10-5 G10-5(0.0-0.5) 09/29/2003 0.50
Acenaphthene		(ug/kg)	118	***************************************	38.7	6.67U	6.67U	10	6.67U
Acenaphthylene		(ug/kg)	744		253	20	12	67.3	6.67U
Anthracene	A STATE OF THE STA	(ug/kg)	1090		404	14	9.33	78	6.67U
Benzo(a)anthracene		(ug/kg)	8270		3050	132	40.7	481	24
Benzo(a)pyrene		(ug/kg)	9240		2790	297	68	936	44.7
Benzo(b)fluoranthene		(ug/kg)	12400		3650	366	101	1200	50.7
Benzo(ghi)perylene	<b>基本电影</b>	(ug/kg)	2880	2.1	920	134	22	386	46
Benzo(k)fluoranthene		(ug/kg)	3800		1160	107	28.7	379	16
Chrysene		(ug/kg)	10000		3560	176	44	561 Å <sup>13</sup>	27.3
Dibenzo(a,h)anthracene		(ug/kg)	660		303	28	6.67U	77.3	8.67
Fluoranthene		(ug/kg)	24500		9200	305	80.7	1360	48
Fluorene		(ug/kg)	247		90	6.67U	6.67U	19.3	6.67U
Indeno(1,2,3-cd)pyrene	<b>₩</b> *	(ug/kg)	2600	:	1270	115	20	337	33,3
Naphthalene		(ug/kg)	96.7		41.3	14	6.67U	16	6.67U
Pentachlorophenol		(ug/kg)	NT		NT	NT	NT	NT	NT
Phenanthrene		(ug/kg)	10900		4440	84.7	30.7	547	12.7
Pyrene		(ug/kg)	28900		13600	483	123	2080	67.3

### Page: 2 of 11 Date: 04/29/2004

### TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	G10-5 G10-5(1.0-1.5) 09/29/2003 1.50	G11-3 G11-3(0-0.5) 09/29/2003 0.50	G11-3 G11-3(1.0-1.5) 09/29/2003 1.50	G15-4 G15-4(0-0.5) 09/29/2003	G15-5 G15-5(0-0.5) 09/29/2003 0.50	G15-6 G15-6(0-0.5) 09/29/2003 0.50
Acenaphthene	(ug/kg)	6.67U	6.67U	6.67U	6.67U	6.67U	6.67U
Acenaphthylene	(ug/kg)	9.33	20.7	6.67U	18	64	18
Anthracene	(ug/kg)	6.67U	14:00	6.67∪	18	55.3	18
Benzo(a)anthracene	(ug/kg)	28	148	6.67U	100	456	118
Benzo(a)pyrene	(ug/kg)	66	285	10.	230	893	237
Benzo(b)fluoranthene	(ug/kg)	62	315	12	<b>31</b> 1	977	277
Benzo(ghi)perylene	(ug/kg)	75.3	315	11.3	254	794	240
Benzo(k)fluoranthene	(ug/kg)	21.3	78	6.67U	82.7	272	79.3
Chrysene	(ug/kg)	<b>32</b>	204	6.67U	145	597	151
Dibenzo(a,h)anthracene	(ug/kg)	12	54	6.67U	47.3	133	42
Fluoranthene	(ug/kg)	52.7	466	11.3	263	1520	277
Fluorene	(ug/kg)	6.67U	6.67U	6.67U	6,67U	10.7	6.67U
Indeno(1,2,3-cd)ругепе	(ug/kg)	50.7	223	8 (34.55.5)	185	583	173
Naphthalene	(ug/kg)	6.67U	6.67U	6.67U	14.7	16	12
Rentachlorophenol	(ug/kg)	NT	NT	NT	NT	NT	NT
Phenanthrene	(ug/kg)	13.3	130	6.67U	60	437	82
Pyrene	(ug/kg)	75.3	605	15.3	367	2100	387

#### TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page: 3 of 11

Date: 04/29/2004

PERIOD: From 09/16/2003 thru 10/21/2003 - Inclusive

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	G17-4 G17-4(0-0.5) 09/29/2003 0.50	G17-5 G17-5(0-0.5) 09/29/2003 0.50	G17-6 G17-6(0.0-0.5) 09/29/2003 0.50	G19-3 G19-3(0-0.5) 09/29/2003 0.50	G19-4 G19-4(0-0.5) 09/29/2003 0.50	G19-5 G19-5(0-0.5) 09/29/2003 0.50
Acenaphthene	(ug/kg)	64.7	6.67U	6.67U	18	15,3	6.67U
Acenaphthylene	(ug/kg)	398	11.3	16.7	96	174	8
Anthracene	(ug/kg)	671	14.7	38.7	131	133	6.67U
Benzo(a)anthracene	(ug/kg)	4110	73.3	78	962	1150	54.7
Benzo(a)pyrene	(ug/kg)	6910	163	128	1430	2320	113
Benzo(b)fluoranthene	(ug/kg)	7300	215	194	1480	2590	128
Benzo(ghi)perylene	(ug/kg)	6520	184	1:87	1330	2730	115 16% ·
Benzo(k)fluoranthene	(ug/kg)	2120	70.7	52.7	511	770	42
Chrysene	(ug/kg)	5390	109	90.7	1170	1570	68
Dibenzo(a,h)anthracene	(ug/kg)	881	38	44	227	373	21.3
Fluoranthene	(ug/kg)	13900	161	142	2770	3710	103
Fluorene	(ug/kg)	173	6.67U	6.67U	40	28	6.67U
Indeno(1,2,3-cd)pyrene	(ug/kg)	4810	<sup>136</sup> 136	144	983	1890	82.7
Naphthalene	(ug/kg)	58.7	6.67U	38	49.3	50.7	16
Pentachlorophenol	(ug/kg)	NT	NT	ТИ	NT	NT	NT
Phenanthrene	(ug/kg)	7560	39.3	70.7	1460	1180	32.7
Pyrene	(ug/kg)	17200	210	160	3750	4890	143

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page: 4 of 11 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

							1	
CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	G27-4 G27-4(0-0.5) 09/29/2003 0.50	G27-5 G27-5(0-0.5) 09/29/2003 0.50	HB01 HB01(1-1.5) 10/15/2003 1.50	HB01 HB01(5-6) 10/15/2003 6.00	HB01 HB01(10-11) 10/15/2003 11.00	HB01 HB01(14-15) 10/15/2003 15.00	
Acenaphthene	(ug/kg)	93.3	8	6.67U	355	442	1010	
Acenaphthylene	(ug/kg)	1060	194	8	70.7	76	208	
Anthracene	(ug/kg)	1160	120	13.3	156	187	409	
Benzo(a)anthracene	(ug/kg)	11100	507	24.7	12.7	14.7	18	
Benzo(a)pyrene	(ug/kg)	16800	1060	32	6.67U	6.67U	6.67U	
Benzo(b)fluoranthene	(ug/kg)	19800	2070	58	9.33	7.33	10	
Benzo(ghi)perylene	(ug/kg)	6000	837	32.7	11.3 EVALUE (	6.67U	6.67U	
Benzo(k)fluoranthene	(ug/kg)	5950	688	15.3	6.67U	6.67U	6.67U	
Chrysene	(ug/kg)	12300	787	82	12	14.7	22	
Dibenzo(a,h)anthracene	(ug/kg)	1230	187	10	6.67U	6.67U	6.67U	
Fluoranthene	(ug/kg)	23500	1280	37.3	29.3	34	50	
Fluorene	(ug/kg)	178	10	7.33	517	655	2180	
Indeno(1,2,3-cd)pyrene	(ug/kg)	5280	762	22.7	6.67U	6.67U	6.67U	
Naphthalene	(ug/kg)	127	68	22	865	2560	6300	
Pentachlorophenol	(ug/kg)	NT	NT	NT	NT	NT	NT	
Phenanthrene	(ug/kg)	6230	285	37.3	797	1110	3240	
Pyrene	(ug/kg)	34100	2270	52	96	88.7	99.3	

#### Page: 5 of 11 Date: 04/29/2004

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

4.							
CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	HB02 HB02(1-1.5) 10/15/2003 1:50	HB02 HB02(5-6) 10/15/2003 6.00	HB02 HB02(10-11) 10/15/2003	HB02 HB02(13-14) 10/15/2003 14.00	HB03 HB03(1-1.5) 10/15/2003	HB03 HB03(5-6) 10/15/2003 6.00
Acenaphthene	(ug/kg)	6.67U	507	1130J	1480	6.67U	6.67U
Acenaphthylene	(ug/kg)	6.67U	223	440J	483	6.67U	6.67U
Anthracene	(ug/kg)	6.67U	363	653J	793	6,67U	6.67U
Benzo(a)anthracene	(ug/kg)	6.67U	14.7	35.3J	120	16	6.67U
Benzo(a)pyrene	(ug/kg)	6.67U	6.67U	12J	72	6.67U	6.67U
Benzo(b)fluoranthene	(ug/kg)	6.67U	6.67U	14.7J	58.7	6.67U	6.67U
Benzo(ghi)perylene	(ug/kg)	::6,67U	6.67U	6.67U	58.7	11.3	6.67U
Benzo(k)fluoranthene	(ug/kg)	6.67U	6.67U	6.67U	20.7	6.67U	6.67U
Chrysene	(ug/kg)	6.67U	21.3	47.3J	147	6.67U	6.67U
Dibenzo(a,h)anthracene	(ug/kg)	6.67U	6.67U	6.67U	14	6.67U	6.67U
Fluoranthene	(ug/kg)	6.67U	33.3	107J	107	6.67U	6.67U
Fluorene	(ug/kg)	6.67U	1530	3160J	3530	6.67U	6.67U
Indeno(1,2,3-cd)pyrene	(ug/kg)	6.67U	6.67U	6.67U	47.3	6.67U	6.67U
Naphthalene	(ug/kg)	6.67U	383	507J	960	6.67U	6.67∪
Pentachlorophenol	(ug/kg)	NT	NT HERE	NT	NT CARACTE	NT	NT A A A A A A
Phenanthrene	(ug/kg)	6.67U	2350	4340J	6170	8	6.67U
Pyrene	(ug/kg)	6.67U	207	471J	270	6.67U	6.67U

#### Page: 6 of 11 Date: 04/29/2004

### TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	HB03 HB03(10-11) 10/15/2003 11.00	HB04 HB04(1-1.5) 10/15/2003 1.50	HB04 HB04(5-6) 10/15/2003 6.00	HB04 (HB04(10-11) 10/15/2003 11:00	HB04 HB04(12-13) 10/15/2003 13.00	HB05 HB05(1-1.5) 10/15/2003 1,50
Acenaphthene	(ug/kg)	656	6.67U	6.67U	6.67U	22.7	6.67U
Acenaphthylene	(ug/kg)	162	6.67U	6.67U	6.67U	82	6.67U
Anthracene	(ug/kg)	312	6.67U	6.67U	6.67U	36	7.33J
Benzo(a)anthracene	(ug/kg)	17.3	6.67U	6.67U	6.67U	30	18J
Benzo(a)pyrene	(ug/kg)	7.33	6.67U	6.67U	6.67U	27.3	6.67U
Benzo(b)fluoranthene	(ug/kg)	10	11.3	6.67U	6.67U	26	9.33J
Benzo(ghi)perylene	(ug/kg)	6.67U	6. <b>6</b> 7U	6.67U	6.67U	12.7	16J
Benzo(k)fluoranthene	(ug/kg)	6.67U	6.67U	6.67U	6.67U		6.67U
Chrysene	(ug/kg)	24	6.67U	6.67U	6.67U	25.3	6.67U
Dibenzo(a,h)anthracene	(ug/kg)	6.67U	6.67U	6.67U	6.67U	6.67U	6.67U
Fluoranthene	(ug/kg)	65.3	6.67U	6.67U	6.67U	60	14.7J
Fluorene	(ug/kg)	1220	6.67U	6.67U	11.3		13.3J
Indeno(1,2,3-cd)pyrene	(ug/kg)	6.67U	6.67U	6.67U	6.67U	10	6.67U
Naphthalene	(ug/kg)	10600	6.67U	6.67U	6.67U	125	8J
Pentachiorophenol	(ug/kg)	NT	NT	NT-	NT	NT W	NT
Phenanthrene	(ug/kg)	2030	6.67U	6.67U	6.67U	101	16.7J
Pyrene	(ug/kg)	152	6.67U	6.67U	6.67U	101	6.67U

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page; 7 of 11

Date: 04/29/2004

PERIOD: From 09/16/2003 thru 10/21/2003 - Inclusive

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	HB05 HB05(5-6) 10/15/2003 6.00	HB05 HB05(10-11) 10/15/2003 11.00	LW019S LW19S(16.5-17.5) 09/29/2003 17.50	LW020D LW020D(12-13) 09/30/2003 13.00	LW021S LW21S(13.5-14.5) 10/21/2003 14.50	LW022D LW022D (24-25) 09/24/2003 25.00
Acenaphthene	(ug/kg)	403	588	2240	1140	399	6. <b>67</b> U
Acenaphthylene	(ug/kg)	68	162	963	533	125	6.67U
Anthracene	(ug/kg)	96.7	179	1140	800	175	8
Benzo(a)anthracene	(ug/kg)	21.3	23.3	70.7	78	138	16.7
Benzo(a)pyrene	(ug/kg)	15.3	16.7	13.3	49.3	132	12.7
Benzo(b)fluoranthene	(ug/kg)	12.7	17.3	12.7	54	119	12.7
Benzo(ghi)perylene	(ug/kg)	16.7	11.3	10	24	56	6.67U
Benzo(k)fluoranthene	(ug/kg)	6.67U	6.67U	6.67U	17.3	46	6.67U
Chrysene	(ug/kg)	24	24.7	93.3	81.3	136	14
Dibenzo(a,h)anthracene	(ug/kg)	6. <b>67</b> U	6.67∪	6.67U	6.67U	16	6.67U
Fluoranthene	(ug/kg)	43.3	50.7	70	170	139	29.3
Fluorene	(ug/kg)	647	855	5950	4060	813	6.67U
Indeno(1,2,3-cd)pyrene	(ug/kg)	6.67U	6.67U	8.67	20.7	48.7	6.67U
Naphthalene	(ug/kg)	2090	6620	4360	627	6220	6.67U
Pentachlorophenol	(ug/kg)	NT	NT <sup>.</sup>	NT	NT	NT	NT
Phenanthrene	(ug/kg)	779	1170	9610	5170	1300	32.7
Pyrene	(ug/kg)	107	121	1250	443	255	38

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page: 8 of 11 Date: 04/29/2004

PERIOD: From 09/16/2003 thru 10/21/2003 - Inclusive

	SITE	LW023D	LW024D	LW025D	LW026D	LW027S	LW027S
CONSTITUENT	SAMPLE ID DATE DEPTH (ft)	LW023D22.5-23.5 09/24/2003 23.50	LW24D(26-27) 10/20/2003 27:00	LW25D(28-29) 10/20/2003 29.00	LW026D (15-16) 09/25/2003 16:00	LW027S13 09/25/2003 14.50	
Acenaphthene	(ug/kg)	6.67U	6.67U	6.67U	513	953	1520
Acenaphthylene	(ug/kg)	8	6.67U	11.3	157	353	470
Anthracene	(ug/kg)	22	10.7	43.3	94.7	170	309
Benzo(a)anthracene	(ug/kg)	41.3	21.3	115	13.3	9.33	68.7
Benzo(a)pyrene	(ug/kg)	31.3	20	101	8.67	6.67U	52.7
Benzo(b)fluoranthene	(ug/kg)	29.3	17.3	88.7	8	6.67U	50
Benzo(ghi)perylene	(ug/kg)	14	9.33	43.3	6.67U	6.67U	26
Benzo(k)fluoranthene	(ug/kg)	11.3	7.33	40	6.67U	6.67U	15.3
Chrysene	(ug/kg)	36.7	20	118J	11.3	12	64
Dibenzo(a,h)anthracene	(ug/kg)	6.67U	6.67U	13.3	6.67U	6. <del>6</del> 7U	6.67U
Fluoranthene	(ug/kg)	73.3	30,7	169	26	23.3	137
Fluorene	(ug/kg)	6.67U	6.67U	6.67U	1130	2110	2840
Indeno(1,2,3-cd)pyrene	(ug/kg)	12	8	38	6.67U	6:67U	21.3
Naphthalene	(ug/kg)	6.67U	6.67U	6.67U	213	680	983
Pentachlorophénol	(ug/kg)	NT	NT	NT	NT	NT	NT
Phenanthrene	(ug/kg)	62.7	21.3	136J	1170	1880	2760
Pyrene	(ug/kg)	94.7	41.3	233J	52.7	49.3	240

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page: 9 of 11 Date: 04/29/2004

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PERIOD: From

From 09/16/2003 thru 10/21/2003 - Inclusive

	. • 1						
CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW028S LW028S (12-13) 09/23/2003 13:00	LW028S LW028S(12-13) 10/01/2003 13.00	LW029D LW029D (15-16) 09/22/2003 16.00	LW030S LW030S13.5-14.5 09/19/2003 14.50	LW031S LW031S(15-16) 10/01/2003 16.00	LW032D LW032D13.5-14.5 10/02/2003 14.50
Acenaphthene	(ug/kg)	6:67U	6.67U	6.67U	1280	6.67U	251J
Acenaphthylene	(ug/kg)	6.67U	6.67U	6.67U	1490	6.67U	105J
Anthracene	(ug/kg)	6.67U	6.67U	6.67U	545	6.67U	42.7J
Benzo(a)anthracene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	7.33J
Benzo(a)pyrene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	8J 🐪
Benzo(b)fluoranthene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	8.67J
Benzo(ghi)perylene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	6.67UJ
Benzo(k)fluoranthene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	6.67UJ
Chrysene	(ug/kg)	6.67U	6.67U	6. <b>6</b> 7U	13.3U	6.67U	7.33J
Dibenzo(a,h)anthracene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	6.67UJ
Eluoranthene	(ug/kg)	6.67U	6.67U	6.67U	61.3	6.67U	22.7J
Fluorene	(ug/kg)	6.67U	6.67U	6.67U	3330	6.67U	349J
Indeno(1,2,3-cd)pyrene	(ug/kg)	6.67U	6.67U	6.67U	13.3U	6.67U	6.67UJ
Naphthalene	(ug/kg)	6. <b>6</b> 7U	6.67∪	6.67U	624	6.67U	2240J
Pentachlorophenol	(ug/kg)	NT	NT	NT	NT	NT	NT
Phenanthrene	(ug/kg)	6.67U	6.67U	6.67U	5290	6.67U	288J
Pyrène	(ug/kg)	6.67U	6.67U	6.67U	171	6.67U	37.3J

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page: 10 of 11 Date: 04/29/2004

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE: Soil

PERIOD:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW033S LW033S13.5-14.5 10/02/2003 14.50	LW035D LW035(27-28) 10/01/2003 28.00	LW035D LW035(29-29.5) 10/01/2003 29.50	LW035D LW035(30-31) 10/01/2003 31.00	OX005S OX-5s (12-13) 09/17/2003 13.00	OX006S OX-6s (15-16) 09/17/2003 16.00	
Acenaphthene	(ug/kg)	6.67ŲJ	6.67U	6.67⊔	10.7	NT	NT	
Acenaphthylene	(ug/kg)	7.33J	6.67U	10	43.3	NT	NT	
Anthracene	(ug/kg)	129J	6.67U	36	78	NT	NT	
Benzo(a)anthracene	(ug/kg)	45.3J	14.7	48.7	104	NT	NT	
Benzo(a)pyrene	(ug/kg)	67.3J	12.7	49.3	115	NT THE	NT	
Benzo(b)fluoranthene	(ug/kg)	65.3J	14.7	40	94	NT	NT	
Benzo(ghi)perylene	(ug/kg)	47.3J	7.33	23.3	66.7	NT	NT 1900 C	
Benzo(k)fluoranthene	(ug/kg)	22.7J	6.67U	14.7	30	NT	NT	
Chrysene	(ug/kg)	48J	14	43.3	91.3	NT	NT	- 4
Dibenzo(a,h)anthracene	(ug/kg)	6.67UJ	6.67U	6.67U	11.3	NT	NT	
Fluoranthene	(ug/kg)	148J	22.7	78	205	NT	NT	
Fluorene	(ug/kg)	7.33J	6.67U	6.67U	20.7	NT	NT	
Indeno(1,2,3-cd)pyrene	(ug/kg)	30.7J	6.67U	19.3	49.3	NT	NT	
Naphthalene	(ug/kg)	6.67UJ	6.67U	6.67U	49.3	NT	NT	
Pentachlorophenol	(ug/kg)	NT	NT	NT	NT	333U	576	
Phenanthrene	(ug/kg)	107J	14.7	44.7	161	NT	NT	
Pyrene	(ug/kg)	165J	28.7	107	270	NT 11 ARTS	NT	

## TABLE E-1 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS PAHS AND PENTACHLOROPHENOL (SW8270SIM) TIME OIL NORTHWEST TERMINAL

Page: 11 of 11 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft)	OX007S OX-7s (12-13) 09/18/2003 13.00	OX008D OX-8d13.5-14.5 09/16/2003 14.50	OX008D OX-8d (22-23) 09/16/2003 23.00	OX008S OX-8s13.5-14.5 09/16/2003 14.50	
Acenaphthene	4 4	(ug/kg)	NT	NT	NT	NT	
Acenaphthylene		(ug/kg)	NT	NT	NT	NT	
Anthracene		(ug/kg)	NT	NE	NT	NT	
Benzo(a)anthracene		(ug/kg)	NT	NT	NT	NT	
Benzo(a)pyrene		(ug/kg)	NT (*t)	NT	NT H	11 A NT	
Benzo(b)fluoranthene		(ug/kg)	NT	NT	NT	NT	
Benzo(ghi)perylene		(ug/kg)	NT	NT	NT	NT	
Benzo(k)fluoranthene		(ug/kg)	NT	NT	NT	NT	
Chrysene (1988)		(ug/kg)	NT	NT	NT	NT	
Dibenzo(a,h)anthracene		(ug/kg)	NT	NT	NT	NT	
luoranthene	75 N	(ug/kg)	NT	NT	NT	NT	
Fluorene		(ug/kg)	NT	NT	NT	NT	
ndeno(1,2,3-cd)pyrene		(ug/kg)	NT	NT	NT	NENT HAMP	
Naphthalene		(ug/kg)	NT	NT	NT	NT	
Pentachlorophenol		(ug/kg)	333U	12900	333U 🐘	3220	
Phenanthrene		(ug/kg)	NT	NT	NT	NT	
Pyrene		(ug/kg)	NT	NT	NT WY	NT gg 's	

#### Page: 1 of 7 Date: 04/29/2004

## TABLE E-2 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS VOLATILES (SW8260) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	HB01 HB01(1-1.5) 10/15/2003 1.50	HB01 HB01(5-6) 10/15/2003 6.00	HB01 HB01(10-11) 10/15/2003 11.00	HB01 HB01(14-15) 10/15/2003 15.00	HB02 HB02(1-1.5) 10/15/2003 1.50	HB02 HB02(5-6) 10/15/2003 6.00
1,2,4-Trimethylbenzene	(ug/kg)	10U	36000J	116000J	141000J	10U	12000J
1,2-Dibromoethane	(ug/kg)	100	10UJ	10UJ	10UJ	10U	10UJ
1,2-Dichlorobenzene	(ug/kg)	NT	NT	NT SEESES	NT	NT 🔆	NT
1,2-Dichloroethane	(ug/kg)	10U	10UJ	100UJ	100UJ	10U	10UJ
1,3,5-Trimethylbenzene	(ug/kg)	10U.	652J	5810J	8290J	10U	1260J
Benzene	(ug/kg)	10U	10UJ	100UJ	136J	10U	36.8J
Ethylbenzene	(ug/kg)	100	608J	11800J	33600J	10U	212J
Isopropylbenzene	(ug/kg)	10∪	657J	6470J	8300J	10U	1370J
m.p-Xylene	(ug/kg)	20U	4330J	89600J	239000J	20U	982J
Methyl tert-butyl ether	(ug/kg)	10U	10UJ	100UJ	100UJ	10U	10UJ
n-Propylbenzene	(ug/kg)	10U	2240J	16200J	21900J	10U	3390J
o-Xylene	(ug/kg)	10U	1680J	35400J	88600J	10U	471J
Toluene	(ug/kg)	100	196J	1520J	20000J	10U	33.2J

#### Page: 2 of 7 Date: 04/29/2004

## TABLE E-2 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS VOLATILES (SW8260) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	HB02 HB02(10-11) 10/15/2003 11.00	HB02 HB02(13-14) 10/15/2003 14:00	HB03 HB03(1-1.5) 10/15/2003 1.50	HB03 HB03(5-6) 10/15/2003 6.00	HB03 HB03(10-11) 10/15/2003 11.00	HB04 HB04(1:1.5) 10/15/2003 1.50
1,2,4-Trimethylbenzene	(ug/kg)	22J	16.9J	10U	100	151000	1007
1,2-Dibromoethane	(ug/kg)	10UJ	10UJ	10U	10U	10U	10UJ
1,2-Dichlorobenzene	(ug/kg)	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane	(ug/kg)	10UJ	10UJ	10U	10U	100U	10UJ
1,3,5-Trimethylbenzene	(ug/kg)	17 <b>1</b> 0J	2420J	10U	10U	8130	10UJ
Benzene	(ug/kg)	85.7J	94,2J	10U	10U	100U	10UJ
Ethylbenzene	(ug/kg)	57.4J	56.3J	10U	100	39000	10UJ
Isopropylbenzene	(ug/kg)	1930J	2720J	10U	10U	8930	10UJ
m,p-Xylene	(ug/kg)	194J	332J	30.4	20U	182000	20UJ
Methyl tert-butyl ether	(ug/kg)	10UJ	10UJ	10U	10U	100U	10UJ
n-Propylbenzene	(ug/kg)	3820J	5630J	10U	100	28800	1000
o-Xylene	(ug/kg)	94.1J	114J	10U	10U	112000	10UJ
Toluene	(ug/kg)	62.5J	225J	10U	10U	1780	10UJ

### TABLE E-2 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS VOLATILES (SW8260)

TIME OIL NORTHWEST TERMINAL

Page: 3 of 7 Date: 04/29/2004

PERIOD: From (

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft)	HB04 HB04(5-6) 10/15/2003 6.00	HB04 HB04(10-11) 10/15/2003 11.00	HB04 HB04(12-13) 10/15/2003 13.00	HB05 HB05(1-1.5) 10/15/2003 1.50	HB05 HB05(5-6) 10/15/2003 6:00	HB05 HB05(10-11) 10/15/2003 11.00
1,2,4-Trimethylbenzene		(ug/kg)	10ÚJ	10U	15.7J	<b>10</b> U	153000J	114000J
1,2-Dibromoethane		(ug/kg)	10UJ	10U	10UJ	10U	10UJ	10UJ
1,2-Dichlorobenzene	1 <sup>5</sup> ·	(ug/kg)	NT	NT	NT ·	NT SEE	NT	NT
1,2-Dichloroethane		(ug/kg)	10UJ	10U	10UJ	10U	10UJ	10UJ
1,3,5-Trimethylbenzene		(ug/kg)	10UJ	10U	1090J	10U	3890J	5130J
Benzene		(ug/kg)	10UJ	10U	10UJ	10U	21J	5290J
Ethylbenzene		(ug/kg)	10UJ	10U	10UJ	10U	11400J	26800J
Isopropylbenzene		(ug/kg)	10 <b>U</b> J	10U	1420J	10U	4240J	5270J
m,p-Xylene	9,4,7	(ug/kg)	20UJ	20U	44.8J	29.1	99400J	182000J
Methyl tert-butyl ether		(ug/kg)	10UJ	10U	10UJ	10U	10UJ	10UJ
n-Propylbenzene		(ug/kg)	10UJ	10U	1600J	10U 🗀	20000J	16000J
o-Xylene		(ug/kg)	10UJ	10U	30.4J	10.2	41900J	67900J
Toluene		(ug/kg)	1000	10U	20.5J	10U	3230J	64900J

#### Page: 4 of 7 Date: 04/29/2004

## TABLE E-2 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS VOLATILES (SW8260) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft)	LW019S LW19S(16.5-17.5) 09/29/2003 17.50	LW020D LW020D(12-13) 09/30/2003 13.00	LW021S LW21S(13.5-14.5) 10/21/2003 14.50	LW022D LW022D (24-25) 09/24/2003 25.00	LW023D LW023D22.5-23.5 09/24/2003 23.50	LW024D LW24D(26-27) 10/20/2003 27.00
1,2,4-Trimethylbenzene		(ug/kg)	10U	10UJ	73800J	NT	NT	10U
1,2-Dibromoethane		(ug/kg)	10U	10UJ	100UJ	10U	100	10U
1,2-Dichlorobenzene		(ug/kg)	NT	NT	NT MARKET	NT	NT :	NT See
1,2-Dichloroethane		(ug/kg)	10U	10UJ	100UJ	10ឋ	10U	10 <b>U</b>
1,3,5-Trimethylbenzene		(ug/kg)	10U	1110J	6830J	NT .	NT	10U
Benzene		(ug/kg)	10U	10UJ	254J	NT	NT	10U
Ethylbenzene		(ug/kg)	10U	10UJ	16500J	NT	NT	10U
Isopropylbenzene		(ug/kg)	2050J	1160J	7880J	NT	NT	10U
m,p-Xylene	<u>}</u> :	(ug/kg)	20년 💮	20UJ	68800J	NT	NT	20U
Methyl tert-butyl ether		(ug/kg)	10U	10UJ	100UJ	10U	10U	10U
n-Propylbenzene	1 (%) 14 (%)	(ug/kg)	4900J	2520J	17800J	NT	NT	10U
o-Xylene		(ug/kg)	10U	42J	16200J	NT	NT	10U
Toluene		(ug/kg)	10U	10UJ	676J	NT	NT	10U

#### Page: 5 of 7 Date: 04/29/2004

### TABLE E-2 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS VOLATILES (SW8260) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW025D LW25D(28-29) 10/20/2003 29.00	LW026D LW026D (15-16) 09/25/2003 16.00	LW027S LW027S13.5-14.5 09/25/2003 14.50	LW027S LW027S (21-22) 09/25/2003 22.00	LW028S LW028S (12-13) 09/23/2003 13.00	LW028S LW028S(12-13) 10/01/2003 13.00
1,2,4-Trimethylbenzene	(ug/kg)	10UJ	23.7J	15.6J	12.9J	NT	10U
1,2-Dibromoethane	(ug/kg)	10UJ	10U	10U	100	10U	10U
1,2-Dichlorobenzene	(üg/kg)	NT	NT	NT	NT BEACH	NT	NT
1,2-Dichloroethane	(ug/kg)	10UJ	10U	10U	10U	10U	10U
1,3,5-Trimethylbenzene	(ug/kg)	10UJ	1040J	832J	1050J	NT	10∪
Benzene	(ug/kg)	10UJ	44.5J	10U	10U	NT	10U
Ethylbenzene	(ug/kg)	10UJ 🦠	10U	10U	10U	NT	10U
Isopropylbenzene	(ug/kg)	10UJ	1000J	835J	1110J	NT	10U
m,p-Xylene	(ug/kg)	<b>20U</b> J	84.6J	38.2	20U	NT	20U
Methyl tert-butyl ether	(ug/kg)	10UJ	10 <b>U</b>	10U	10U	10U	10U
n-Propylbenzene	(ug/kg)	10UJ	1430J	1170J	1260J	NT	10U
o-Xylene	(ug/kg)	<b>10U</b> J	<b>6</b> 6J	10U	10U	NT	10U
Toluene	(ug/kg)	10UJ	29.9J	14.5 <b>J</b>	18.3J	NT	10U

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

		SITE	LW029D	LW030S	LW031S	LW032D	LW033S	LW035D
CONSTITUENT		SAMPLE ID DATE DEPTH (ft)	LW029D (15-16) 09/22/2003 16.00	LW030S13.5-14.5 09/19/2003 14.50	LW031S(15-16) 10/01/2003 16.00	LW032D13.5-14.5 10/02/2003 14:50	LW033S13.5-14.5 10/02/2003 14.50	LW035(27-28) 10/01/2003 28.00
1,2,4-Trìmethylbenzene		(ug/kg)	NT NT	NT	10U	100	10U	10U
1,2-Dibromoethane		(ug/kg)	10U	10U	10U	10U	10U	10U
1,2-Dichlorobenzene		(ug/kg)	NT	NT	NT/ 🦮	100U	NT	NT
1,2-Dichloroethane		(ug/kg)	10U	10U	10U	10U	10U	10U
1,3,5-Trimethylbenzene	e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	(ug/kg)	NT	NT YES	10U	860J	<b>10</b> U	10U
Benzene		(ug/kg)	NT	NT	10U	10U	10U	10U
Ethylbenzene		(ug/kg)	NT	NT	10U	140U(1)	100	10U
Isopropyibenzene		(ug/kg)	NT	NT	10U	<b>77</b> 3J	10U	10U
m,p-Xylene		(ug/kg)	NT	NT	20U	20U	20U	20U
Methyl tert-butyl ether		(ug/kg)	10U	10U	10U	10U	10U	10U
n-Propylbenzene		(ug/kg)	NT :	NT	10U	1750J	10U	10U
o-Xylene		(ug/kg)	NT	NT	10U	10U	10U	10U
Toluene	William Control	(ug/kg)	NT	NT	10U	13.6	10U	10U

## TABLE E-2 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS VOLATILES (SW8260) TIME OIL NORTHWEST TERMINAL

Page: 7 of 7 Date: 04/29/2004

PERIOD: From 09/16/2003 thru 10/21/2003 - Inclusive

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW035D LW035[ LW035(29-29.5) LW035( 10/01/2003 10/01/20 29:50 31.00	30-31)	
1,2,4-Trimethylbenzene	(ug/kg)	100 100		
1,2-Dibromoethane	(ug/kg)	10U 10U		
1,2-Dichlorobenzene	(ug/kg)	NT NT		
1,2-Dichloroethane	(ug/kg)	10U 10U		
1,3,5-Trimethylbenzene	(ug/kg)	10U 10U	1999 Port	
Benzene	(ug/kg)	10U 10U		
Ethylbenzene	(ug/kg)	10U 10U		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Isopropylbenzene	(ug/kg)	10U 10U		
m,p-Xylene	(ug/kg)	20U 20U	*# 	
Methyl tert-butyl ether	(ug/kg)	10U 10U		
n-Propylbenzene	(ug/kg)	100		
o-Xylene	(ug/kg)	10U 10U		
Toluene	(ug/kg)	10U 10U		

#### Page: 1 of 7 Date: 04/29/2004

### TABLE E-3 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS (ORDEQ-1"PH)

TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft)	HB01 HB01(4-1.5) 10/15/2003 1.50	HB01 HB01(5-6) 10/15/2003 6.00	HB01 HB01(10-11) 10/15/2003 11.00	HB01 HB01(14-15) 10/15/2003 15.00	HB02 HB02(1-1.5) 10/15/2003 1.50	HB02 HB02(5-6) 10/15/2003 6:00
Diesel	a wife of Name is	(mg/kg)	33.9	2710J	4020J	10100J	97.4	7170J
Gasoline		(mg/kg)	32.4	2540	3280	6880	2.68U	1540J
TPH-Motor Oil Range		(mg/kg)	56.4U	109J	8 <u>3M</u> J	588U	63.6	280MJ

#### PHASE III REMEDIAL INVESTIGATION

#### SOIL ANALYTICAL RESULTS

Page: 2 of 7

Date: 04/29/2004

#### TOTAL PETROLEUM HYDROCARBONS (ORDEQ-TPH)

TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

	SITE	HB02	HB02	HB03	HB03	HB03	HB04
CONSTITUENT	SAMPLE ID DATE DEPTH (ft)	HB02(10-11) 10/15/2003 11.00	HB02(13-14) 10/15/2003 14.00	HB03(1-1.5) 10/15/2003 1.50	HB03(5-6) 10/15/2003 6.00	HB03(10-11) 10/15/2003 11.00	HB04(1-1.5) 10/15/2003 1.50
Diesel	(mg/kg)	12000J	13100J	681	159	5250J	31.6
Gasoline	(mg/kg)	1830J	2670	2.78U	3.43	8560	5.7
TPH-Motor Oil Range	(mg/kg)	585U	561U	229M	70.7M	218MJ	53.6U

#### PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS

Page: 3 of 7

Date: 04/29/2004

#### TOTAL PETROLEUM HYDROCARBONS (ORDEQ-TPH)

TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	HB04 HB04(5-6) 10/15/2003 6.00	HB04 HB04(10-11) 10/15/2003 11.00	HB04 HB04(12-13) 10/15/2003 13.00	HB05 HB05(1-1.5) 10/15/2003 1.50	HB05 HB05(5-6) 10/15/2003 6.00	HB05 HB05(10-11) 10/15/2003 11:00
Diesel	(mg/kg)	16.9U	893J	2430J	2330J	2200	5910J
Gasoline	(mg/kg)	121	10.1	1330J	32.8	8120	3070
TPH-Motor Oil Range	(mg/kg)	56.2U	190MJ	117MJ	429MJ	83.3M	101MJ

#### PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS

Page: 4 of 7

Date: 04/29/2004

#### TOTAL PETROLEUM HYDROCARBONS (ORDEQ-TPH)

TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

		SITE	LW019S	LW020D	LW021S	LW022D	LW023D	LW024D
	**	SAMPLE ID	LW19S(16.5-17.5)	LW020D(12-13)	LW21S(13.5-14.5)	LW022D (24-25)	LW023D22.5-23.5	LW24D(26-27)
CONSTITUENT		DATE	09/29/2003	09/30/2003	10/21/2003	09/24/2003	09/24/2003	10/20/2003
		DEPTH (ft)	17.50	13.00	14.50	25.00	23.50	27.00
Diesel		(mg/kg)	36100J	13700J	6290J	16.6U	16.6U	20.2
Gasoline		(mg/kg)	2310	2310	8920J	2.76U	2.76U	3.22U
TPH-Motor Oil Range		(mg/kg)	63.8U	611U	642U	55.2U	55.3U	64.4U

Page: 5 of 7

Date: 04/29/2004

#### PHASE III REMEDIAL INVESTIGATION

#### SOIL ANALYTICAL RESULTS

#### TOTAL PETROLEUM HYDROCARBONS (ORDEQ-TPH) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW025D LW25D(28-29) 10/20/2003 29.00	LW026D LW026D (15-16) 09/25/2003 16.00	LW027S LW027S13.5-14.5 09/25/2003 14.50	LW027S LW027S (21-22) 09/25/2003 22.00	LW028S LW028S (12-13) 09/23/2003 13:00	LW028S LW028S(12-13) 10/01/2003 13.00	
Diesel	(mg/kg)	18.7U	12500J	9000J	9790J	17.90	18.1U	
Gasoline	(mg/kg)	3.12U	2270J	4 <b>1</b> 90J	5010J	2.98U	3.66	
TPH-Motor Oil Range	(mg/kg)	62.4U	64.5U	59:5U	56.9U	59.7U	60.5U	

#### Page: 6 of 7 Date: 04/29/2004

## TABLE E-3 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS (ORDEQ-TPH) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW029D LW029D (15-16) 09/22/2003 16.00	LW030S LW030S13.5-14.5 09/19/2003 14.50	LW031S LW031S(15-16) 10/01/2003 16.00	LW032D LW032D13.5-14.5 10/02/2003 14.50	LW033S LW033S13.5-14.5 10/02/2003 14.50	LW035D LW035(27-28) 10/01/2003 28.00
Diesel	(mg/kg)	18.1U	6260J	18.4U	6450	82.4	16.5U
Gasoline	(mg/kg)	3.02U	1880J	3.07U	4200J	3.16U	12.7
TPH-Motor Oil Range	(mg/kg)	60.4U	55U	61.3U	57.6U	175	54.9U

Page: 7 of 7

Date: 04/29/2004

#### PHASE III REMEDIAL INVESTIGATION

#### SOIL ANALYTICAL RESULTS

#### TOTAL PETROLEUM HYDROCARBONS (ORDEQ-TPH)

TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW035D LW035(29-29.5 10/01/2003 29.50	LW035D 5) LW035(30-31) 10/01/2003 31:00		
Diesel	(mg/kg)	19.7U	44.3		
Gasoline	(mg/kg)	7.28	5.07		
TPH-Motor Oil Range	(mg/kg)	65.8U	92.3	AND STATE OF THE S	

Page: 1 of 9 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

		(1987년 - 1987년 년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987년 - 1987						
A STATE OF THE STA	SITE	G07-3	G07-4	G07-5	G10-4	G10-5	G11-3	
	SAMPLE ID	G7-3(0-0.5)	G7-4(0-0.5)	G7-5(0-0.5)	G10-4(0-0.5)	G10-5(0.0-0.5)	G11-3(0-0.5)	
CONSTITUENT	DATE	09/29/2003	09/29/2003	09/29/2003	09/29/2003	09/29/2003	09/29/2003	
	DEPTH (ft)	0.50	0.50	0.50	0.50	0.50	0.50	
Lead	(mg/kg)	18.8	5.07	5.87	19.7	1.85U	1.85U	
Zinc	(mg/kg)	97.9	70.3	102	68.9	57.7	86.6	

Page: 2 of 9 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

	-	보다. 						
CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft)	G11-3 G11-3(1.0-1.5) 09/29/2003 1.50	G15-4 G15-4(0-0.5) 09/29/2003 0.50	G15-5 G15-5(0-0.5) 09/29/2003 0.50	G15-6 G15-6(0-0.5) 09/29/2003 0.50	G17-4 G17-4(0-0.5) 09/29/2003 0.50	G17-5 G17-5(0-0.5) 09/29/2003 0.50
Lead Zinc	:	(mg/kg) (mg/kg)	1.67U 52.1	16.3 77.7	76.5 73	12.7 63.9	43 148	11.9J 80.8J

#### TABLE E-4 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS METALS (SW6010)

TIME OIL NORTHWEST TERMINAL

Page: 3 of 9 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

	 				•			
CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	G17-6 G17-6(0.0-0.5) 09/29/2003 0.50	G19-3 G19-3(0-0.5) 09/29/2003 0.50	G19-4 G19-4(0-0.5) 09/29/2003	G19-5 G19-5(0-0.5) 09/29/2003 0.50	HB01 HB01(1-1.5) 10/15/2003 1.50	HB01 HB01(5-6) 10/15/2003 6.00	
Lead Zinc	(mg/kg) (mg/kg)	28 410	158 87.1	236 197	6.96 228	53.2 199	29.1 43.8	

Page: 4 of 9 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE	HB01 HB01(10-11) 10/15/2003	HB01 HB01(14-15) 10/15/2003	HB02 HB02(1- <b>1</b> .5) 10/15/2003	НВ02 НВ02(5-6) 10/15/2003	HB02 HB02(10-11) 10/15/2003	HB02 HB02(13-14) 10/15/2003		
	DEPTH (ft)	11.00	15.00	1.50	6,00	11.00	14.00		
Lead Zinc	(mg/kg) (mg/kg)	42.5	3.22 47.7	1.56U 56.1	39.1	50.1	1.43U 40.1		

#### Page: 5 of 9 Date: 04/29/2004

## TABLE E-4 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS METALS (SW6010) TIME OIL NORTHWEST TERMINAL

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT		SITE SAMPLE ID DATE DEPTH (ft)	HB03 HB03(1-1.5) 10/15/2003 1.50	HB03 HB03(5-6) 10/15/2003 6.00	HB03 HB03(10-11 10/15/2003 11.00	HB04 HB04(1-1.5) 10/15/2003 1.50	HB04 HB04(5-6) 10/15/2003 6.00	HB04 HB04(10-11) 10/15/2003 11.00
Lead	Mark to	(mg/kg)	2.99	3.58	2.05	1.61U	1.67U	1.64U
Zinc		(mg/kg)	70	45.4	44.8	51	48.4	45.4

Page: 6 of 9

Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

	· •						
	SITE	HB04	HB05	HB05	HB05	LW019S	LW020D
	SAMPLE ID	HB04(12-13)	HB05(1-1.5)	HB05(5-6)	HB05(10-11)	LW19S(16.5-17.5)	LW020D(12-13)
CONSTITUENT	DATE	10/15/2003	10/15/2003	10/15/2003	10/15/2003	09/29/2003	09/30/2003
:	DEPTH (ft)	13.00	1.50	6.00	11.00	17.50	13.00
Lead	(mg/kg)	1.56U	28.9	1.61U	1.64U	2.28U	2.44U
Zinc	(mg/kg)	43.2	55.9	44.9	45	NT	NT

Page: 7 of 9

Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW021S LW21S(13.5-14.5) 10/21/2003 14.50	LW022D LW022D (24-25) 09/24/2003 25.00	LW023D LW023D22.5-23.5 09/24/2003 23.50	LW024D LW24D(26-27) 10/20/2003 27.00	LW025D LW25D(28-29) 10/20/2003 29.00	LW026D LW026D (15-16) 09/25/2003 16.00
Lead	(mg/kg)	1,61U	4.49J	1.92UJ	1.67U	1.79U	1.85U
Zinc	(mg/kg)	NT	NT	NT	NT	NT	NT

Page: 8 of 9

Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

				7			*
	SITE SAMPLE ID	LW027S LW027S13.5-14.5	LW027S LW027S (21-22)	LW028S LW028S (12-13)	LW028S LW028S(12-13)	LW029D LW029D (15-16)	LW030S LW030S13.5-14.5
CONSTITUENT	DATE	09/25/2003	09/25/2003	09/23/2003	10/01/2003	(19-16) (19-16)	09/19/2003
	DEPTH (ft)	14.50	22.00	13.00	13.00	16.00	14.50
Lead	(mg/kg)	1.72U	1.72U	1.67UJ	2.42U	1.85UJ	1.79U
Zinc	(mg/kg)	NT	NT	NT	NT	NT	NT

Page: 9 of 9

Date: 04/29/2004

PERIOD: From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

	***************************************						
d d	SITE	LW031S	LW032D	LW033S	LW035D	LW035D	LW035D
	SAMPLE ID	LW031S(15-16)	LW032D13.5-14.5	LW033S13.5-14.5	LW035(27-28)	LW035(29-29.5)	LW035(30-31)
CONSTITUENT	DATE	10/01/2003	10/02/2003	10/02/2003	10/01/2003	10/01/2003	10/01/2003
	DEPTH (ft)	16.00	14.50	14.50	28.00	29.50	31.00
Lead	(mg/kg)	2.45U	1.67U	2.25U	2,2U	2.63U	4.38
Zinc	(mg/kg)	NT	NT	NT	NT	NT	NT

Page: 1 of 1 Date: 04/29/2004

PERIOD:

From 09/16/2003 thru 10/21/2003 - Inclusive

SAMPLE TYPE:

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	LW022D LW022D (24-25) 09/24/2003 25.00	LW023D LW023D22.5-23.5 09/24/2003 23.50	LW028S LW028S (12-13) 09/23/2003 13.00	LW029D LW029D (15-16) 09/22/2003 16.00	LW030S LW030S13.5-14.5 09/19/2003 14.50	, e
Benzene	(mg/kg)	0.0276U	0.0276U	0.0298U	0.0302U	0.0275U	
Ethylbenzene	(mg/kg)	0.11U	0.111U	0.1 <b>19</b> U	0.121U	0.759	
				0.44011	0.40411	2.62.	
Toluene	(mg/kg)	0.11U	0.111U	0.1 <b>19U</b>	0.121U	0.304	

TABLE E-6 Page 1 of 10

### PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS - NEW WELL INSTALLATIONS TIME OIL NORTHWEST TERMINAL

Local Depth Lab Date Collec	(ft): (7-8) o ID: 0411033-04	LW037D (6-7) 0411033-05 11/02/2004	LW038D (7-8) 0411033-06 11/02/2004	LW039D (5-6) 0411033-07 11/03/2004	LW040S (21-21.5) 0411033-02 11/01/2004	LW041S (0-0.5) 0410156-02 10/28/2004	LW041S (1-1.5) 0410156-03 10/28/2004	LW041S (16-17) 0410156-05 10/28/2004	LW042S (0-0.5) 0410156-06 10/28/2004
TOTAL METALS (mg/kg)									
Method 6010									
Arsenic	1.75 U	1.59 U	1.69 U	1.52 U	1.61 U	1.52 U	1.72 U	2.21	1.72 U
Chromium	13.5	11.9	14.7	11.8	12.8	14.2	14.7	13	18.5
Copper	11.3	10.4	10.2	9.97	12.3	23.9	11.7	11.2	20.4
Lead	1.75 U	1.59 U	1.69 U	1.52 U	1.61 U	1.52 U	1.72 U	1.61 U	14.1
Nickel	13.4	12.1	13.4	14.4	14.5	37.2	16.4	12.1	23.5
Zinc	46.7	45.2	40.1	41.2	50	74	46.2	44.1	72.4
DIESEL RANGE HYDROCARBONS (mg/kg) NWTPH-DX									
Diesel Range Hydrocarbons	18.8 U	19.1 U	19.5 U	20.2 U	17.4 U	16.4 U	16.5 U	16.8 U	17.2 U
TPH-Motor Oil Range	62.5 U	63.6 U	64.9 U	155	57.9 U	63.3	54.8 U	56 U	57.5 U
GASOLINE RANGE HYDROCARBONS (mg/kg) NWTPH-G Gasoline Range Hydrocarbons	3.12 U	3.18 U	3.24 U	3.36 U	2.89 U	2.74 U	2.74 U	2.8 U	2.87 U
SEMIVOLATILES (μg/L) Method 8270									
1,2,4-Trichlorobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66,7 U	66.7 U	66.7 U	66.7 U	66.7 U
1,2-Dichlorobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
1,3-Dichlorobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
1.4-Dichlorobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
2,4,5-Trichlorophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,4,6-Trichlorophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,4-Dichlorophenol	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dimethylphenol	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dinitrophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,4-Dinitrotoluene	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,6-Dinitrotoluene	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2-Chloronaphthalene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
2-Chlorophenol	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U

TABLE E-6 Page 2 of 10

### PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS - NEW WELL INSTALLATIONS TIME OIL NORTHWEST TERMINAL

Location: Depth (ft): Lab ID: Date Collected:	LW036D (7-8) 0411033-04 11/02/2004	LW037D (6-7) 0411033-05 11/02/2004	LW038D (7-8) 0411033-06 11/02/2004	LW039D (5-6) 0411033-07 11/03/2004	LW040S (21-21.5) 0411033-02 11/01/2004	LW041S (0-0.5) 0410156-02 10/28/2004	LW041S (1-1.5) 0410156-03 10/28/2004	LW041S (16-17) 0410156-05 10/28/2004	LW042S (0-0.5) 0410156-06 10/28/2004
2-Methylnaphthalene	66.7 U	66,7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
2-Methyliphenol	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
2-Nitroaniline	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2-Nitrophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
3- & 4-Methylphenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
3,3-Dichlorobenzidine	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
3-Nitroaniline	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
4,6-Dinitro-2-Methylphenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
4-Bromophenyl-phenylether	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
4-Chloro-3-methylphenol	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
4-Chloroaniline	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Chlorophenylphenyl ether	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
4-Nitroaniline	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
4-Nitrophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Acenaphthene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66,7 U
Acenaphthylene	66.7 U	66.7 U	66.7 U	112	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Anthracene	66.7 U	66.7 U	66.7 U	355	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzo(a)anthracene	66.7 U	66.7 U	66.7 U	668	66.7 U	179	66.7 U	66.7 U	71.7
Benzo(a)pyrene	66.7 U	66.7 U	66.7 U	585	66.7 U	269	66.7 U	66.7 U	119
Benzo(b)fluoranthene	66.7 U	66.7 U	66.7 U	517	66.7 U	331	66.7 U	66.7 U	156
Benzo(g,h,i)perylene	66.7 U	66.7 U	66.7 U	157	66.7 U	228	66.7 U	66.7 U	78.7
Benzo(k)fluoranthene	66.7 U	66.7 U	66.7 U	187	66.7 U	95.7	66.7 U	66.7 U	66.7 U
Benzoic acid	667 U	667 U	667 U	667 U	667 U	667 U	667 U	667 U	667 U
Benzyl alcohol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Bis(2-chloroethoxy)methane	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Bis-(2-Chloroethyl) Ether	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Bis(2-chloroethyl)ether	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Bis(2-chloroisopropyl)ether	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Bis(2-ethylhexyl)phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	190	66.7 U
Butyl benzyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Carbazole	66.7 U	66.7 U	66.7 U	66.7 U	66,7 U	66.7 U	66.7 U	66.7 U	66.7 U
Chrysene	66.7 U	66.7 U	66.7 U	655	66.7 U	211	66.7 U	66.7 U	83
Dibenzo(a,h)anthracene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Dibenzofuran	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Diethyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U

TABLE E-6 Page 3 of 10

### PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS - NEW WELL INSTALLATIONS TIME OIL NORTHWEST TERMINAL

Location: Depth (ft): Lab ID: Date Collected:	LW036D (7-8) 0411033-04 11/02/2004	LW037D (6-7) 0411033-05 11/02/2004	LW038D (7-8) 0411033-06 11/02/2004	LW039D (5-6) 0411033-07 11/03/2004	LW040S (21-21.5) 0411033-02 11/01/2004	LW041S (0-0.5) 0410156-02 10/28/2004	LW041S (1-1.5) 0410156-03 10/28/2004	LW041S (16-17) 0410156-05 10/28/2004	LW042S (0-0.5) 0410156-06 10/28/2004
Dimethyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Di-n-butyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Di-n-octyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Fluoranthene	66.7 U	66.7 U	66.7 U	775	66.7 U	399	87.7	66.7 U	169
Fluorene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Hexachlorobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Hexachlorobutadiene	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Hexachlorocyclopentadiene	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Hexachloroethane	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Indeno(1,2,3-cd)pyrene	66.7 U	66.7 U	66.7 U	160	66.7 U	168	66.7 U	66.7 U	66.7 U
Isophorone	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Naphthalene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Nitrobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
N-Nitrosodimethylamine	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
N-Nitroso-Di-N-Propylamine	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
N-Nitrosodiphenylamine	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Pentachlorophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Phenanthrene	66.7 U	66.7 U	66.7 U	674	66.7 U	143	66.7 U	66.7 U	66.7 U
Phenol	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Pyrene	66.7 U	66.7 U	66.7 U	1090	66.7 U	580	101	66.7 U	267
VOLATILES (µg/L)									
Method 8260B									
1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA.
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE E-6 Page 4 of 10

Location: Depth (ft):	LW036D (7-8)	LW037D (6-7)	LW038D (7-8)	LW039D (5-6)	LW040S (21-21.5)	LW041S (0-0.5)	LW041S (1-1.5)	LW041S (16-17)	LW042S (0-0.5)
Lab ID:	0411033-04	0411033-05	0411033-06	0411033-07	0411033-02	0410156-02	0410156-03	0410156-05	0410156-06
Date Collected:	11/02/2004	11/02/2004	11/02/2004	11/03/2004	11/01/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004
1,2-Dichlorobenzene	NA	NA NA	NA	NA	NA	NA.	NA	NA	NA NA
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone (MIBK)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA

Page 5 of 10

Location:	LW036D	LW037D	LW038D	LW039D	LW040S	LW041S	L.W041S	LW041S	LW042S
Depth (ft):	(7-8)	(6-7)	(7-8)	(5-6)	(21-21.5)	(0-0.5)	(1-1.5)	(16-17)	(0-0.5)
Lab ID:	0411033-04	0411033-05	0411033-06	0411033-07	0411033-02	0410156-02	0410156-03	0410156-05	0410156-06
Date Collected:	11/02/2004	11/02/2004	11/02/2004	11/03/2004	11/01/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene	NA	NA							
Methyl tert-butyl ether	NA	NA							
Methylene chloride	NA	NA							
Naphthalene	NA	NA							
n-Butylbenzene	NA	NA							
-Propylbenzene	NA	NA							
-Xylene	NA	NA							
ec-Butylbenzene	NA	NA							
Styrene	NA	NA							
ert-Butylbenzene	NA	NA							
etrachloroethene	NA	NA							
oluene	NA	NA							
rans-1,2-Dichloroethene	NA	NA							
rans-1,3-Dichloropropene	NA	NA							
richloroethene	NA	NA							
richlorofluoromethane	NA	NA							
/inyl Chloride	NA	NA							
ercent Moisture	20	21.4	22.9	25.7	13.6	8.61	8.84	10.7	13

TABLE E-6 Page 6 of 10

Da	Location: Depth (ft): Lab ID: ate Collected:	LW042S (1-1.5) 0410156-07 10/28/2004	LW042S (5-5.5) 0410156-08 10/28/2004	LW042S (13-14) 0410156-09 10/28/2004	LW043S (0-0.5) 0410156-10 10/28/2004	LW043S (1-1.5) 0410156-11 10/28/2004	LW043S (13-14) 0410156-13 10/28/2004	LW044S (0-0.5) 0410156-14 10/28/2004	LW044S (1-1.5) 0410156-15 10/28/2004	LW044S (12.5-13.5) 0410156-17 10/28/2004	LW045D (27-28) 0411033-03 11/01/2004
TOTAL METALS (mg/	/kg)										
Method 6010											
Arsenic		1.52 U	NA	1.61 U	1.72 U	1.56 U	1.56 U	1.72 U	1.72 U	1.79 U	1.59 U
Chromium		26.3	NA	12.4	146	29.2	12.9	89.7	14.3	12.1	14.4
Copper		21.7	NA	10.8	35.7	19.3	12.2	19.7	11.8	11.8	11.7
Lead		33	NA	1.61 U	141	16.6	1.56 U	55.6	1.72 U	1.79 U	1.59 U
Nickel		18.3	NA	12.1	40.5	18.5	14.4	43.4	15	12.8	16.1
Zinc		106	NA	42.2	156	91.9	47.3	158	49.3	43.8	45.8
DIESEL RANGE HYDROCARBONS (m NWTPH-DX	g/kg)										
Diesel Range Hydroca	rbons	66	16.5 U	4750	44.9	36.5	15100	17 U	16.7 U	3500	19 U
TPH-Motor Oil Range		221	55 U	54.5 U	79.5	56.6 U	293 U	56.6 U	55.5 U	59 U	63.2 U
GASOLINE RANGE HYDROCARBONS (m NWTPH-G Gasoline Range Hydro		2.84 U	NA	705	18.2	3.54	2330	48.1	8.44	10800	3.16 U
SEMIVOLATILES (µg/l	L)										
Method 8270	,										
1,2,4-Trichlorobenzene		66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
1,2-Dichlorobenzene		66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 <b>U</b>	66.7 U
1,3-Dichlorobenzene		66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
1,4-Dichlorobenzene		66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
2,4,5-Trichlorophenol		333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,4,6-Trichlorophenol		333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,4-Dichlorophenol		200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dimethylphenol		200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
2,4-Dinitrophenol		333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,4-Dinitrotoluene		333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2,6-Dinitrotoluene		333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2-Chloronaphthalene		66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
2-Chlorophenol		66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U

TABLE E-6 Page 7 of 10

Locati Depth Lab Date Collect	(ft): (1-1.5) ID: 0410156-07	LW042S (5-5.5) 0410156-08 10/28/2004	LW042S (13-14) 0410156-09 10/28/2004	LW043S (0-0.5) 0410156-10 10/28/2004	LW043S (1-1.5) 0410156-11 10/28/2004	LW043S (13-14) 0410156-13 10/28/2004	LW044S (0-0.5) 0410156-14 10/28/2004	LW044S (1-1.5) 0410156-15 10/28/2004	LW044S (12.5-13.5) 0410156-17 10/28/2004	LW045D (27-28) 0411033-03 11/01/2004
2-Methylnaphthalene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
2-Methylphenol	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
2-Nitroaniline	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
2-Nitrophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
3- & 4-Methylphenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
3,3-Dichlorobenzidine	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
3-Nitroaniline	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
4,6-Dinitro-2-Methylphenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
4-Bromophenyl-phenylether	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66,7 U	66.7 U	66.7 U	66.7 U
4-Chloro-3-methylphenol	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
4-Chloroaniline	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
4-Chlorophenylphenyl ether	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
4-Nitroaniline	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
4-Nitrophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Acenaphthene	67	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Acenaphthylene	368	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Anthracene	471	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzo(a)anthracene	3180	66.7 U	66.7 U	201	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzo(a)pyrene	5010	66.7 U	66.7 U	295	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzo(b)fluoranthene	5820	66.7 U	66.7 U	393	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzo(g,h,i)perylene	2200	66.7 U	66.7 U	203	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzo(k)fluoranthene	1550	66.7 U	66.7 U	117	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Benzoic acid	667 U	667 U	667 U	667 U	667 U	667 U	667 U	667 U	667 U	667 U
Benzyl alcohol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Bis(2-chloroethoxy)methane	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Bis-(2-Chloroethyl) Ether	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Bis(2-chloroethyl)ether	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Bis(2-chloroisopropyl)ether	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Bis(2-ethylhexyl)phthalate	66.7 U	66.7 U	66.7 U	70	66.7 U	66.7 U	66.7 U	66.7 U	159	66.7 U
Butyl benzyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Carbazole	81.7	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Chrysene	4090	66.7 U	66.7 U	235	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Dibenzo(a,h)anthracene	479	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Dibenzofuran	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Diethyl phthalate	66.7 U	331 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U

TABLE E-6 Page 8 of 10

Dep	eation: LW042S th (ft): (1-1.5) ab ID: 0410156-07 ected: 10/28/2004	LW042S (5-5.5) 0410156-08 10/28/2004	LW042S (13-14) 0410156-09 10/28/2004	LW043S (0-0.5) 0410156-10 10/28/2004	LW043S (1-1.5) 0410156-11 10/28/2004	LW043S (13-14) 0410156-13 10/28/2004	LW044S (0-0.5) 0410156-14 10/28/2004	LW044S (1-1.5) 0410156-15 10/28/2004	LW044S (12.5-13.5) 0410156-17 10/28/2004	LW045D (27-28) 0411033-03 11/01/2004
Dimethyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Di-n-butyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Di-n-octyl phthalate	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Fluoranthene	9800	66.7 U	102	502	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Fluorene	129	66.7 U	1460	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	284	66.7 U
Hexachlorobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Hexachlorobutadiene	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Hexachlorocyclopentadiene	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Hexachloroethane	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Indeno(1,2,3-cd)pyrene	1840	66.7 U	66.7 U	158	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Isophorone	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Naphthalene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Nitrobenzene	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
N-Nitrosodimethylamine	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
N-Nitroso-Di-N-Propylamine	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
N-Nitrosodiphenylamine	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
Pentachlorophenol	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U	333 U
Phenanthrene	2700	66.7 U	2980	171	66.7 U	9050	66.7 U	66.7 U	215	66.7 U
Phenol	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U	133 U
Pyrene	11100	66.7 U	127	792	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U	66.7 U
VOLATILES (μg/L)										
Method 8260B										
1,1,1,2-Tetrachloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,1,1-Trichloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,1,2,2-Tetrachloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,1,2-Trichloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,1-Dichloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,1-Dichloroethene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,1-Dichloropropene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2,3-Trichlorobenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2,3-Trichloropropane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2,4-Trichlorobenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2,4-Trimethylbenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2-Dibromoethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA

Page 9 of 10

Location: Depth (ft): Lab ID: Date Collected:	LW042S (1-1.5) 0410156-07 10/28/2004	LW042S (5-5.5) 0410156-08 10/28/2004	LW042S (13-14) 0410156-09 10/28/2004	LW043S (0-0.5) 0410156-10 10/28/2004	LW043S (1-1.5) 0410156-11 10/28/2004	LW043S (13-14) 0410156-13 10/28/2004	LW044S (0-0.5) 0410156-14 10/28/2004	LW044S (1-1.5) 0410156-15 10/28/2004	LW044S (12.5-13.5) 0410156-17 10/28/2004	LW045D (27-28) 0411033-03 11/01/2004
1,2-Dichlorobenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2-Dichloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,2-Dichloropropane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,3,5-Trimethylbenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,3-Dichlorobenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,3-Dichloropropane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
1,4-Dichlorobenzene	NA	NA	10 U	10 U	10 U	10 U	10 Ü	10 U	10 U	NA
2,2-Dichloropropane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
2-Butanone	NA	NA	40 U	40 U	40 U	40 U	40 U	40 U	40 U	NA
2-Chlorotoluene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
2-Hexanone	NA	NA	37.8	20 U	20 U	942	20 U	20 U	20 U	NA
4-Chlorotoluene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
4-Isopropyltoluene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
4-Methyl-2-Pentanone (MIBK)	NA	NA	40 U	40 U	40 U	40 U	40 U	40 U	40 U	NA
Acetone	NA	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA
Benzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Bromobenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Bromochloromethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Bromodichloromethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Bromoform	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Bromomethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Carbon disulfide	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Carbon tetrachloride	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Chlorobenzene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Chloroethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Chloroform	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Chloromethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
cis-1,2-Dichloroethene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
cis-1,3-Dichloropropene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Dibromochloromethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Dibromochloropropane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Dibromomethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Dichlorodifluoromethane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Ethylbenzene	NA	NA	10 U	10 U	10 U	22.4	10 U	10 U	10 U	NA
Hexachlorobutadiene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA

# TABLE E-6 PHASE III REMEDIAL INVESTIGATION SOIL ANALYTICAL RESULTS - NEW WELL INSTALLATIONS TIME OIL NORTHWEST TERMINAL

Location:	LW042S	LW042S	LW042S	LW043S	LW043S	LW043S	LW044S	LW044S	LW044S	LW045D
Depth (ft):	(1-1.5)	(5-5.5)	(13-14)	(0-0.5)	(1-1.5)	(13-14)	(0-0.5)	(1-1.5)	(12.5-13.5)	(27-28)
Lab ID:	0410156-07	0410156-08	0410156-09	0410156-10	0410156-11	0410156-13	0410156-14	0410156-15	0410156-17	0411033-03
Date Collected:	10/28/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004	10/28/2004	11/01/2004
Isopropylbenzene	NA	NA	58.4	10 U	10 U	2050	10 U	10 U	3950	NA
m,p-Xylene	NA	NA	20 U	20 U	20 U	35.7	20 U	20 U	31.2	NA
Methyl tert-butyl ether	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Methylene chloride	NA	NA	53.8	71	66.1	65	67.3	60	62	NA
Naphthalene	NA	NA	44	10 U	10 U	32.2	10 U	10 U	10 U	NA
n-Butylbenzene	NA	NA	1170	10 U	10 U	5460	10 U	10 U	206	NA
n-Propylbenzene	NA	NA	471	10 U	10 U	10900	10 U	10 U	5740	NA
o-Xylene	NA	NA	10 U	10 U	10 U	32.2	10 U	10 U	10 U	NA
sec-Butylbenzene	NA	NA	193	10 U	10 U	2100	10 U	10 U	3980	NA
Styrene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
tert-Butylbenzene	NA	NA	10 U	10 U	10 U	51.2	10 U	10 U	32.9	NA
Tetrachloroethene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
Toluene	NA	NA	10 U	10 U	10 U	23.8	10 U	10 U	17.9	NA
trans-1,2-Dichloroethene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
trans-1,3-Dichloropropene	NA	NA	10 U	10 U	10 U	NA				
Trichloroethene	NA	NA	10 U	10 U	10 U	NA				
Trichlorofluoromethane	NA	NA	10 U	10 U	10 U	NA				
Vinyl Chloride	NA	NA	10 U	10 U	10 U	NA				
Percent Moisture	12	9.13	8.24	12.3	11.6	14.8	11.7	9.97	15.3	20.9

U = Indicates the compound was undetected at the reported concentration.

NA = Not analyzed.

Bold indicates detected value.

## **Data Validation Report**

#### **TECHNICAL MEMORANDUM**



TO: Rebekah Brooks, Landau Associates

FROM: April Wallace and Anne Halvorsen, Landau Associates

DATE: December 22, 2004

RE: TIME OIL NORTHWEST TERMINAL NEW WELL INSTALLATION OCT.-NOV. 2004

LABORATORY DATA QUALITY EVALUATION

SOIL ANALYTICAL DATA

#### Introduction

This technical memorandum provides the results of a data quality evaluation for 19 soil samples collected October 27-28, November 1-3, and November 18, 2004 at the Time Oil Northwest Terminal in Portland, Oregon. Six additional samples were archived by the laboratory. A data quality evaluation was performed for volatile organic compounds (VOCs; EPA Method 8260B), semivolatile organic compounds (SVOCs; EPA Method 8270C), pentachlorophenol (PCP; EPA Method 8270-SIM), diesel-range hydrocarbons (NWTPH-Dx), gasoline-range hydrocarbons (NWTPH-Gx), and total priority pollutant metals (EPA Method 6010).

Analyses of soil samples were performed by Specialty Analytical located in Tualatin, Oregon. This data quality evaluation covers Specialty data packages 0410156, 0411033, and 0411117.

The data quality evaluation was performed in accordance with applicable portions of the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review and Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 1994a, b).

The evaluation considered the following elements:

- Chain-of-custody records
- Holding times
- · Method blanks
- Surrogate recoveries
- Matrix spike and laboratory duplicate sample recoveries and relative percent differences (RPDs)
- Laboratory control sample recoveries
- Conclusions and completeness.

Data validation qualifiers are added to sample results based on the evaluation of data quality. The absence of a data qualifier indicates that the data is acceptable without qualifications. Data validation qualifiers are summarized in Table 1.

#### CHAIN-OF CUSTODY RECORDS

Chain-of-custody records were included with each data package. The laboratory received all samples in good condition. All analyses requested on the chain-of-custody were performed.

#### HOLDING TIMES

For all analyses and all samples, except as specified below, the time between sample collection, extraction, and analyses was determined to be within EPA-specified holding times:

• VOC analysis for samples collected on October 27-28, 2004 (data package 0410156), was not requested at the time the laboratory received the samples. The laboratory was requested to analyze for VOCs after the 14-day holding time had expired. Samples were subsequently analyzed 34-35 days after collection, resulting in a holding time exceedance of 20-21 days. Therefore, all VOC results are qualified as estimates (J/UJ).

#### METHOD BLANKS

Method blanks were analyzed with each batch of samples for each analysis. No contamination was detected in any of the method blanks, except as indicated in Table 1 and discussed below:

- Nitrobenzene, 2-methylnaphalene, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and dinbutylphthalate were detected below the practical quantitation limits (PQL) in the method blanks for the SVOC analysis of package 0410156. These compounds were not detected in any associated project samples. No qualification of the data is necessary.
- Butylbenzylphthalate, di-n-butylphthalate, nitrobenzene, and diethylphthalate were detected in one method blank associated with the SVOC analyses reported in data package 0410156. Diethylphthalate was detected in sample LW042S(5-5.5) at a concentration less than ten times the method blank concentration; therefore, it was qualified as nondetect (U).
- Di-n-butylphthalate, fluorene, and nitrobenzene were detected below the PQL in both method blanks associated with the SVOC analyses reported in data package 0411033. These compounds were not detected in any associated project samples; therefore, no qualification of the data is necessary.
- Gasoline was detected below the PQL in one of the method blanks associated with the TPH-G analyses reported in data package 0411033. Gasoline was not detected in any associated project samples; therefore, no qualification of the data is necessary.

• Zinc was detected below the PQL in the method blank associated with the total priority pollutant metals analyses reported in data packages 0410156 and 0411033. All associated project samples had detected levels of zinc well above the action level of five times the method blank concentration; therefore, no qualification of the data is necessary.

#### SURROGATE SPIKE RECOVERIES

Appropriate compounds were used as surrogate spikes for each applicable analysis. All surrogate recoveries were within laboratory-specified control limits, except as indicated in Table 1 and discussed below:

- Package 0410156: recoveries of the surrogate 4-Bromofluorobenzene (4-BFB) in the VOC analyses exceeded the upper laboratory control limits in samples LW043S(13-14) and LW044S(12.5-13.5). The laboratory noted that the high results were due to matrix interference. The detected compounds in the associated samples are qualified as estimates (J).
- Package 0410156: recoveries of several surrogates in the SVOC analyses were outside of the laboratory control limits. According to EPA guidelines, samples are to be qualified only when two or more surrogates within the same fraction (acid/base) are outside of control limits. Only one sample, LW043S(13-14), had two recoveries within the one fraction (base) outside of control limits (2-Fluorobiphenyl recovery was low, and Nitrobenzene-d5 recovery was high). Associated base-neutral compounds for this sample are qualified as estimates J/UJ).
- Package 0410156: recoveries of the surrogate o-terphenyl (o-ter) in the TPH-D analyses exceeded the upper laboratory control limits in samples LW042S(13-14) and LW043S(13-14). The laboratory noted that the high results were due to matrix interference. The detected compounds in the associated samples are qualified as estimates (J).
- Package 0410156: recoveries of the surrogate 4-BFB in the TPH-G analyses did not meet the lower laboratory control limits for several samples. The low results are due to required sample dilution. No qualification of the data is necessary.
- Package 0411033: recoveries of the surrogate 2,4,6-Tribromophenol in the SVOC analyses were low for several samples. Because only one surrogate was out of the laboratory control limits for these analyses, no qualification of the data is necessary.

#### FIELD DUPLICATES

No blind field duplicate soil samples were collected during this sampling event. No qualification of the data is necessary.

#### FIELD TRIP BLANKS

No field trip blanks were collected or submitted for laboratory analysis. No qualification of the data is necessary.

#### LABORATORY CONTROL SAMPLE RESULTS

Laboratory control samples (LCS) were performed for all analyses. Recoveries for the laboratory control samples were all within laboratory-specified control limits. No qualification of the data is necessary.

#### MATRIX SPIKE AND LABORATORY DUPLICATE SAMPLES

Matrix spike/matrix spike duplicate samples and/or laboratory duplicate samples were performed for all analyses for each batch of samples. There were no exceedances of project sample matrix spikes or duplicates. No qualification of the data is necessary.

#### OVERALL DATA QUALITY AND COMPLETENESS

Data precision was evaluated through laboratory duplicates. Data accuracy was evaluated through laboratory control samples, matrix spikes, and surrogate spikes. Based on this data quality evaluation, all of the data were determined to be acceptable.

The completeness for this data set is 100 percent.

#### REFERENCES

EPA. 1994a. Contract Laboratory Program National Functional Guidelines for Organic Data Review. U.S. Environmental Protection Agency.

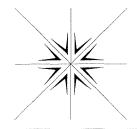
EPA. 1994b. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. U.S. Environmental Protection Agency.

#### TABLE 1 SUMMARY OF DATA QUALIFIERS TIME OIL NORTHWEST TERMINAL 4<sup>TH</sup> QUARTER 2004

Package Number	Analyte	Qualifier	Sample Number	Reason
0410156	All VOCs	J/UJ	LW042S(13-14)	Recommended holding time exceeded by 20-21 days
0410156	All VOCs	J/UJ	LW043S(0-0.5)	Recommended holding time exceeded by 20-21 days
0410156	All VOCs	J/UJ	LW043S(1-1.5)	Recommended holding time exceeded by 20-21 days
0410156	All VOCs	J/UJ	LW043S(13-14)	Recommended holding time exceeded by 20-21 days
0410156	All VOCs	J/UJ	LW044S(0-0.5)	Recommended holding time exceeded by 20-21 days
0410156	All VOCs	J/UJ	LW044S(1-1.5)	Recommended holding time exceeded by 20-21 days
0410156	All VOCs	J/UJ	LW044S(12.5-13.5)	Recommended holding time exceeded by 20-21 days
0410156	All detected VOCs	J	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	All detected VOCs	J	LW044S(12.5-13.5)	Surrogate recoveries exceeded control limits
0410156	Diesel	J	LW042S(13-14)	Surrogate recoveries exceeded control limits
0410156	Diesel	J	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Diethylphthalate	U	LW042S(5-5.5)	Method blank contamination
0410156	1,2,4-Trichlorobenzene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	1,2-Dichlorobenzene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	1,3-Dichlorobenzene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	1,4-Dichlorobenzene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	2,4-Dinitrotoluene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	2,6-Dinitrotoluene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	2-Chloronaphthalene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	2-Methylnaphthalene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	2-Nitroaniline	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	3,3-Dichlorobenzidine	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	3-Nitroaniline	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	4-Bromophenyl phenyl ether	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	4-Chloroaniline	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	4-Chlorophenyl phenyl ether	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	4-Nitroaniline	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Acenaphthene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Acenaphthylene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Anthracene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Benz(a)anthracene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Benzo(a)pyrene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Benzo(b)fluoranthene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits

Package Number	Analyte	Qualifier	Sample Number	Reason
0410156	Benzo(g,h,i)perylene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Benzo(k)fluoranthene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Benzyl alcohol	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Bis(2-chlorethoxy)methane	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Bis(2-chloroethyl)ether	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Bis(2-chloroisopropyl)ether	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Bis(2-ethylhexyl)phthalate	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Butyl benzyl phthalate	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Chrysene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Di-n-butyl phthalate	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Di-n-octyl phthalate	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Dibenz(a,h)anthracene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Dibenzofuran	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Diethyl phthalate	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Dimethyl phythalate	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Fluoranthene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Fluorene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Hexachlorobenzene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Hexachlorobutadiene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Hexachlorocyclopentadiene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Hexachloroethane	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Ideno(1,2,3-cd)pyrene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Isophorone	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	N-Nitrosodi-n-propylamine	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	N-Nitrosodimethylamine	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	N-Nitrosodiphenylamine	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Naphthalene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Nitrobenzene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Phenanthrene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits
0410156	Pyrene	J/UJ	LW043S(13-14)	Surrogate recoveries exceeded control limits

## **Laboratory Data Packets**



19761 S.W. 95th Place Tualatin, OR 97062 (503) 612-9007 Fax (503) 612-8572 1 (877) 612-9007

December 06, 2004

DEC - 9 2004

Mark Chandler Time Oil Co. 2737 West Commodore Way Seattle, WA 98199-1257

TEL: (206) 285-2400 FAX (206) 285-7833

RE: NW Terminal Additional Well Install Phase

Dear Mark Chandler:

Order No.: 0410156

Specialty Analytical received 17 samples on 10/29/2004 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Ned Engleson

Project Manager

echnical Review

CC:

Terry McGoorty @ Landau Associates

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Seattle (Edmonds)  Tacoma (253) 926-2  Spokane (509) 327-2  LANDAU ASSOCIATES Portland (Tigard) (509)	2493 9737 503) 443-6010	-of-Custody		DateOf
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BZTO104(e)023650 WHITE COPY - Project File YELLOW COPY - Laboratory

Seattle (Edmonds) (425) 778-0907

☐ **Tacoma** (253) 926-2493 ☐ **Spokane** (509) 327-9737

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LLOTH35(D-DS)	1435		/
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LW043S(5-5.5)	1445		
LLOD435(13-14)	155		
10044S(0-0,5)	1130		
4.50-1.53	1135		
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Lab Order:

0410156

Client:

Time Oil Co.

Project:

NW Terminal Additional Well Inst

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Dat
0410156-01A	LW0040R(14-14.5)	10/27/2004 2:20:00 PM	Soil	HOLD per Client Request			11/4/2004
0410156-02A	LW041S(0-0.5)	10/28/2004 9:15:00 AM		NWTPH-Dx		11/5/2004	11/10/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				PERCENTMOISTURE			11/2/2004
0410156-02B				SEMI-VOLATILEORGANICS		11/4/2004	11/7/2004
				SEMI-VOLATILEORGANICS		11/4/2004	11/8/2004
				Total Metals by ICP		11/1/2004	11/6/2004
0410156-03A	LW041S(1-1.5)	10/28/2004 9:20:00 AM		NWTPH-Dx		11/5/2004	11/8/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				PERCENTMOISTURE			11/2/2004
0410156-03B				SEMI-VOLATILEORGANICS		11/4/2004	11/7/2004
				Total Metals by ICP		11/1/2004	11/6/2004
0410156-04A	LW041S(5-5.5)	10/28/2004 9:35:00 AM		HOLD per Client Request			11/4/2004
0410156-05A	LW041S(16-17)	10/28/2004 9:55:00 AM		NWTPH-Dx		11/5/2004	11/8/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				PERCENTMOISTURE			11/2/2004
0410156-05B				SEMI-VOLATILEORGANICS		11/4/2004	11/7/2004
				Total Metals by ICP		11/1/2004	11/6/2004
0410156-06A	LW042S(0-0.5)	10/28/2004 7:45:00 AM		NWTPH-Dx		11/5/2004	11/8/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				PERCENTMOISTURE			11/2/2004
0410156-06B				SEMI-VOLATILEORGANICS		11/4/2004	11/7/2004
				Total Metals by ICP		11/1/2004	11/6/2004
0410156-07A	LW042S(1-1.5)	10/28/2004 7:50:00 AM		NWTPH-Dx		11/5/2004	11/10/2004
				NWTPH-Gx		11/1/2004	11/1/2004
				PERCENTMOISTURE			11/2/2004

Lab Order:

0410156

Client:

Time Oil Co.

Project:

NW Terminal Additional Well Inst

SEMI-VOLATILEORGANICS	Soil	10/00/00/15 50 00 135		
		10/28/2004 7:50:00 AM	LW042S(1-1.5)	0410156-07B
SEMI-VOLATILEORGANICS				
SEMI-VOLATILEORGANICS				
Total Metals by ICP				
Total Metals by ICP				
NWTPH-Dx		10/28/2004 8:05:00 AM	LW042S(5-5.5)	0410156-08A
PERCENTMOISTURE				
SEMI-VOLATILEORGANICS				0410156-08B
NWTPH-Dx		10/28/2004 8:25:00 AM	LW042S(13-14)	0410156-09A
NWTPH-Gx				
PERCENTMOISTURE				
SEMI-VOLATILEORGANICS				0410156-09B
Total Metals by ICP				
Total Metals by ICP				
VOLATILES by GC/MS				
VOLATILES by GC/MS				
NWTPH-Dx		10/28/2004 2:35:00 PM	LW043S(0-0.5)	0410156-10A
NWTPH-Gx				
PERCENTMOISTURE				
SEMI-VOLATILEORGANICS				0410156-10B
SEMI-VOLATILEORGANICS				
Total Metals by ICP				
Total Metals by ICP				
Total Metals by ICP		•		
Total Metals by ICP				
VOLATILES by GC/MS				
NWTPH-Dx		10/28/2004 2:40:00 PM	LW043S(1-1.5)	0410156-11A
NWTPH-Gx				
PERCENT MOISTURE SEMI-VOLATILEORGANICS NWTPH-Dx NWTPH-GX PERCENT MOISTURE SEMI-VOLATILEORGANICS Total Metals by ICP Total Metals by ICP VOLATILES by GC/MS VOLATILES by GC/MS NWTPH-Dx NWTPH-Gx PERCENT MOISTURE SEMI-VOLATILEORGANICS SEMI-VOLATILEORGANICS Total Metals by ICP Total Metals by ICP Total Metals by ICP Total Metals by ICP Total Metals by ICP Total Metals by ICP VOLATILES by GC/MS NWTPH-Dx		10/28/2004 8:25:00 AM 10/28/2004 2:35:00 PM	LW042S(13-14)  LW043S(0-0.5)	

Lab Order:

0410156

Client:

Time Oil Co.

Project:

NW Terminal Additional Well Inst

Analysis Da	e Prep Date	TCLP Date	Test Name	Matrix	Collection Date	Client Sample ID	Sample ID
11/2/200			PERCENTMOISTURE	Soil	10/28/2004 2:40:00 PM	LW043S(1-1.5)	0410156-11A
11/7/200	11/4/2004		SEMI-VOLATILEORGANICS				0410156-11B
11/6/200	11/1/2004		Total Metals by ICP				
11/8/200	11/1/2004		Total Metals by ICP				
11/9/200	11/1/2004		Total Metals by ICP				
12/1/200			VOLATILES by GC/MS				
11/4/200			HOLD per Client Request		10/28/2004 2:45:00 PM	LW043S(5-5.5)	0410156-12A
11/10/200	11/5/2004		NWTPH-Dx		10/28/2004 3:05:00 PM	LW043S(13-14)	0410156-13A
11/1/200	11/1/2004		NWTPH-Gx				
11/2/2004			PERCENTMOISTURE				•
11/7/200	11/4/2004		SEMI-VOLATILEORGANICS				0410156-13B
11/8/2004	11/4/2004		SEMI-VOLATILEORGANICS				
11/6/2004	11/1/2004		Total Metals by ICP				
11/8/2004	11/1/2004		Total Metals by ICP				
12/1/2004			VOLATILES by GC/MS				
12/2/2004			VOLATILES by GC/MS				
12/2/2004			VOLATILES by GC/MS				
11/8/2004	11/5/2004		NWTPH-Dx		10/28/2004 11:30:00 AM	LW044S(0-0.5)	0410156-14A
11/1/2004	11/1/2004		NWTPH-Gx				
11/2/2004			PERCENTMOISTURE				
11/7/2004	11/4/2004		SEMI-VOLATILEORGANICS				0410156-14B
11/6/2004	11/1/2004		Total Metals by ICP				
11/8/2004	11/1/2004		Total Metals by ICP				
11/9/2004	11/1/2004		Total Metals by ICP				
12/1/2004			VOLATILES by GC/MS				
11/8/2004	11/5/2004		NWTPH-Dx		10/28/2004 11:35:00 AM	LW044S(1-1.5)	0410156-15A
11/1/2004	11/1/2004		NWTPH-Gx				
11/2/2004			PERCENTMOISTURE				

Lab Order:

0410156

Client:

Time Oil Co.

Project:

NW Terminal Additional Well Inst

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Dat
0410156-15B	LW044S(1-1.5)	10/28/2004 11:35:00 AM	Soil	SEMI-VOLATILEORGANICS		11/4/2004	11/7/2004
				Total Metals by ICP		11/1/2004	11/8/2004
				Total Metals by ICP		11/1/2004	11/6/2004
				VOLATILES by GC/MS			12/1/2004
0410156-16A	LW044S(5-5.5)	10/28/2004 11:50:00 AM		HOLD per Client Request			11/4/2004
0410156-17A	LW044S(12.5-13.5)	10/28/2004 12:10:00 PM		NWTPH-Dx		11/5/2004	11/8/2004
				NWTPH-Gx		11/1/2004	11/2/2004
				PERCENTMOISTURE			11/2/2004
0410156-17B				SEMI-VOLATILEORGANICS		11/4/2004	11/7/2004
				Total Metals by ICP		11/1/2004	11/7/2004
				Total Metals by ICP		11/1/2004	11/8/2004
				VOLATILES by GC/MS			12/2/2004
				VOLATILES by GC/MS			12/2/2004
	,			VOLATILES by GC/MS			12/2/2004

Date: 06-Dec-04

**CLIENT:** 

Time Oil Co.

Lab Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0410156-01

Collection Date: 10/27/2004 2:20:00 PM

**Client Sample ID:** 

LW0040R (14-14.5)

Matrix:

SOIL

Analyses

Result

Limit Qual Units

DF

Date Analyzed

HOLD PER CLIENT REQUEST

PER CLIENT

Analyst: ADM

HOLD Hold

11/4/2004 1

**Date:** 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-02 **Collection Date:** 10/28/2004 9:15:00 AM

Client Sample ID: LW041S (0-0.5) Matrix: SOIL

Client Sample ID: LW041S (0-0.5)	Matrix: SOIL					
Analyses	Result	Limit	Qual Un	its	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tif</b>
Diesel	ND	16.4	mg	/Kg-dry	1	11/10/2004
Lube Oil	63.3	54.7	mg	/Kg-dry	1	11/10/2004
Surr: o-Terphenyl	90.8	50-150	%F	REC	1	11/10/2004
NWTPH-GX		NWTPH-GX				Analyst: <b>tlf</b>
Gasoline	ND	2.74	mg	/Kg-dry	1	11/1/2004
Surr: 4-Bromofluorobenzene	92.0	50-150	%F	REC	1	11/1/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.52	mg	/Kg	1	11/6/2004 10:49:52 PM
Chromium	14.2	0.379	mg	/Kg	1	11/6/2004 10:49:52 PM
Copper	23.9	0.758	mg	/Kg	1	11/6/2004 10:49:52 PM
Lead	ND	1.52	mg	/Kg	1	11/6/2004 10:49:52 PM
Nickel	37.2	0.379	mg	/Kg	1	11/6/2004 10:49:52 PM
Zinc	74.0	0.758	mg.	/Kg	1	11/6/2004 10:49:52 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 3:45:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 3:45:00 PM
1,3-Dichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 3:45:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 3:45:00 PM
2,4,5-Trichlorophenol	ND	333	μg/	Kg	1	11/7/2004 3:45:00 PM
2,4,6-Trichlorophenol	ND	333	μg/	Kg	1	11/7/2004 3:45:00 PM
2,4-Dichlorophenol	ND	200	μg/	Kg	1	11/7/2004 3:45:00 PM
2,4-Dimethylphenol	ND	200	μg/	Kg	1	11/7/2004 3:45:00 PM
2,4-Dinitrophenol	ND	333	μg/	Kg	1	11/7/2004 3:45:00 PM
2,4-Dinitrotoluene	ND	333	μg/	Kg	1	11/7/2004 3:45:00 PM
2,6-Dinitrotoluene	ND	333	μg/	Кg	1	11/7/2004 3:45:00 PM
2-Chloronaphthalene	ND	66.7	μg/	Кg	1	11/7/2004 3:45:00 PM
2-Chlorophenol	ND	66.7	μg/l	≺g	1	11/7/2004 3:45:00 PM
2-Methylnaphthalene	ND	66.7	μg/l	≺g	1	11/7/2004 3:45:00 PM
2-Methylphenol	ND	133	μg/l	Κg	1	11/7/2004 3:45:00 PM
2-Nitroaniline	ND	333	μg/l	≺g	1	11/7/2004 3:45:00 PM
2-Nitrophenol	ND	333	μg/l	Кg	1	11/7/2004 3:45:00 PM
3,3-Dichlorobenzidine	ND	333	μg/l	≺g	1	11/7/2004 3:45:00 PM
3-&4-Methylphenol	ND	333	μg/l	_	1	11/7/2004 3:45:00 PM
3-Nitroaniline	ND	333	μg/l		1	11/7/2004 3:45:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/l		1	11/7/2004 3:45:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/l	_	1	11/7/2004 3:45:00 PM
4-Chloro-3-methylphenol	ND	133	μg/ł	-	1	11/7/2004 3:45:00 PM
4-Chloroaniline	ND	200	μg/ł	-	1	11/7/2004 3:45:00 PM

CLIENT: Time Oil Co.				Lab Order:	0410156
Project: NW Terminal Additiona	l Well Insta	II Phase III			
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bd</b> a
4-Chlorophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
4-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 3:45:00 PM
4-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 3:45:00 PM
Acenaphthene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Acenaphthylene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Anthracene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Benz(a)anthracene	179	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Benzo(a)pyrene	269	66.7	μg/Kg	1	11/8/2004 5:22:00 PM
Benzo(b)fluoranthene	331	66.7	μg/Kg	1	11/8/2004 5:22:00 PM
Benzo(g,h,i)perylene	228	66.7	μg/Kg	1	11/8/2004 5:22:00 PM
Benzo(k)fluoranthene	95.7	66.7	μg/Kg	1	11/8/2004 5:22:00 PM
Benzoic Acid	ND	667	μg/Kg	1	11/7/2004 3:45:00 PM
Benzyl Alcohol	ND	333	μg/Kg	1	11/7/2004 3:45:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Bis(2-chloroethyl)ether	ND	133	μg/Kg	1	11/7/2004 3:45:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Butyl benzyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Carbazole	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Chrysene	211	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Di-n-butyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Di-n-octyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Dibenz(a,h)anthracene	ND	66.7	μg/Kg	1	11/8/2004 5:22:00 PM
Dibenzofuran	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Diethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Dimethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Fluoranthene	399	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Fluorene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Hexachlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Hexachlorobutadiene	ND	133	μg/Kg	1	11/7/2004 3:45:00 PM
Hexachlorocyclopentadiene	ND	333	μg/Kg	1	11/7/2004 3:45:00 PM
Hexachloroethane	ND	133	µg/Kg	1	11/7/2004 3:45:00 PM
Indeno(1,2,3-cd)pyrene	168	66.7	μg/Kg	1	11/8/2004 5:22:00 PM
Isophorone	ND	66.7	µg/Kg	1	11/7/2004 3:45:00 PM
N-Nitrosodi-n-propylamine	ND	133	μg/Kg	1	11/7/2004 3:45:00 PM
N-Nitrosodimethylamine	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
N-Nitrosodiphenylamine	ND	66.7	µg/Kg	1	11/7/2004 3:45:00 PM
Naphthalene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Nitrobenzene	ND	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Pentachlorophenol	ND	333	μg/Kg	1	11/7/2004 3:45:00 PM
Phenanthrene	143	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Phenol	ND	133	μg/Kg	1	11/7/2004 3:45:00 PM
Pyrene	580	66.7	μg/Kg	1	11/7/2004 3:45:00 PM
Surr: 2,4,6-Tribromophenol	70.5	57.8-119	%REC	1	11/7/2004 3:45:00 PM

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Well Insta	ll Phase III		Lab Order:	0410156
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D	-		Analyst: bda
Surr: 2-Fluo	probiphenyl	75.8	52.6-93.2	%REC	1	11/7/2004 3:45:00 PM
Surr: 2-Fluc	prophenol	54.8	40.7-111	%REC	1	11/7/2004 3:45:00 PM
Surr: 4-Terp	phenyl-d14	78.5	49.8-118	%REC	1	11/7/2004 3:45:00 PM
Surr: Nitrob	enzene-d5	52.5	44.8-103	%REC	1	11/7/2004 3:45:00 PM
Surr: Pheno	ol-d6	59.5	47.5-117	%REC	1	11/7/2004 3:45:00 PM

**Date:** 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-03 **Collection Date:** 10/28/2004 9:20:00 AM

Client Sample ID: LW041S (1-1.5) Matrix: SOIL

Client Sample ID: LW041S (1-1.5)	Matrix: SOIL					
Analyses	Result	Limit	Qual Units	DF	Date Analyzed	
NWTPH-DX		NWTPH-DX			Analyst: <b>tif</b>	
Diesel	ND	16.5	mg/Ko	g-dry 1	11/8/2004	
Lube Oil	ND	54.8	mg/Kg	g-dry 1	11/8/2004	
Surr: o-Terphenyl	96.3	50-150	%REC	1	11/8/2004	
NWTPH-GX		NWTPH-GX			Analyst: <b>tlf</b>	
Gasoline	ND	2.74	mg/Kg	g-dry 1	11/1/2004	
Surr: 4-Bromofluorobenzene	99.1	50-150	%REC	1	11/1/2004	
TOTAL METALS BY ICP		E6010			Analyst: <b>skc</b>	
Arsenic	ND	1.72	mg/Kg	1	11/6/2004 10:55:12 PM	
Chromium	14.7	0.431	mg/Kg	1	11/6/2004 10:55:12 PM	
Copper	11.7	0.862	mg/Kg	1	11/6/2004 10:55:12 PM	
Lead	ND	1.72	mg/Kg	1	11/6/2004 10:55:12 PM	
Nickel	16.4	0.431	mg/Kg	1	11/6/2004 10:55:12 PM	
Zinc	46.2	0.862	mg/Kg	1	11/6/2004 10:55:12 PM	
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>	
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
1,3-Dichlorobenzene	ND	66.7	. μg/Kg	1	11/7/2004 10:41:00 AM	
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/7/2004 10:41:00 AM	
2,4-Dimethylphenol	ND	200	µg/Kg	1	11/7/2004 10:41:00 AM	
2,4-Dinitrophenol	ND	333	µg/Kg	1	11/7/2004 10:41:00 AM	
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
2-Chlorophenol	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
2-Methylphenol	ND	133	µg/Kg	1	11/7/2004 10:41:00 AM	
2-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
2-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
3-&4-Methylphenol	ND	333	µg/Kg	1	11/7/2004 10:41:00 AM	
3-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM	
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM	
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/7/2004 10:41:00 AM	
4-Chloroaniline	ND	200	μg/Kg	1	11/7/2004 10:41:00 AM	

	e Oil Co.				Lab Order:	0410156
Project: NW	Terminal Additional	l Well Insta	all Phase III			
SEMIVOLATILE ORGA	NICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
4-Chlorophenyl phenyl	ether	ND	66.7	µg/Kg	1	11/7/2004 10:41:00 AM
4-Nitroaniline		ND	333	μg/Kg	1	11/7/2004 10:41:00 AM
4-Nitrophenol		ND	333	μg/Kg	1	11/7/2004 10:41:00 AM
Acenaphthene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Acenaphthylene		ND	66.7	µg/Kg	1	11/7/2004 10:41:00 AM
Anthracene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Benz(a)anthracene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Benzo(a)pyrene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Benzo(b)fluoranthene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Benzo(g,h,i)perylene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Benzo(k)fluoranthene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Benzoic Acid		ND	667	μg/Kg	1	11/7/2004 10:41:00 AM
Benzyl Alcohol		ND	333	μg/Kg	1	11/7/2004 10:41:00 AM
Bis(2-chloroethoxy)met	hane	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Bis(2-chloroethyl)ether		ND	133	μg/Kg	1	11/7/2004 10:41:00 AM
Bis(2-chloroisopropyl)e	ther	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Bis(2-ethylhexyl)phthal	ate	ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Butyl benzyl phthalate		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Carbazole		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Chrysene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Di-n-butyl phthalate		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Di-n-octyl phthalate		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Dibenz(a,h)anthracene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Dibenzofuran		. ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Diethyl phthalate		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Dimethyl phthalate		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Fluoranthene		87.7	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Fluorene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Hexachlorobenzene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Hexachlorobutadiene		ND	133	μg/Kg	1	11/7/2004 10:41:00 AM
Hexachlorocyclopentad	iene	ND	333	μg/Kg	1	11/7/2004 10:41:00 AM
Hexachloroethane		ND	133	μg/Kg	1	11/7/2004 10:41:00 AM
Indeno(1,2,3-cd)pyrene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Isophorone		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
N-Nitrosodi-n-propylami	ne	ND	133	μg/Kg	1	11/7/2004 10:41:00 AM
N-Nitrosodimethylamine		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
N-Nitrosodiphenylamine		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Naphthalene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Nitrobenzene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Pentachlorophenol		ND	333	μg/Kg	1	11/7/2004 10:41:00 AM
Phenanthrene		ND	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Phenol		ND	133	μg/Kg	1	11/7/2004 10:41:00 AM
Pyrene		101	66.7	μg/Kg	1	11/7/2004 10:41:00 AM
Surr: 2,4,6-Tribromop	henol	57.9	57.8-119	%REC	1	11/7/2004 10:41:00 AM

	Time Oil Co. NW Terminal Addition	al Well Insta	ill Phase III		1	Lab Order:	0410156
SEMIVOLATILE OF	RGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Surr: 2-Fluorobij	phenyl	65.9	52.6-93.2		%REC	1	11/7/2004 10:41:00 AM
Surr: 2-Fluoroph	enol	55.4	40.7-111		%REC	1	11/7/2004 10:41:00 AM
Surr: 4-Terphen	yl-d14	62.3	49.8-118		%REC	1	11/7/2004 10:41:00 AM
Surr: Nitrobenze	ne-d5	51.5	44.8-103		%REC	1	11/7/2004 10:41:00 AM
Surr: Phenol-d6		55.5	47.5-117		%REC	1	11/7/2004 10:41:00 AM
Lab ID:	0410156-04	<del></del>		(	Collection Date	: 10/28/200	04 9:35:00 AM
Client Sample ID:	LW041S (5-5.5)				Matrix	: SOIL	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT	REQUEST		PER CLIENT	-			Analyst: <b>ADM</b>
Hold		HOLD				1	11/4/2004

**Date:** 06-Dec-04

**CLIENT:** 

Time Oil Co.

Lab Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0410156-05

Collection Date: 10/28/2004 9:55:00 AM

Client Sample ID:

LW041S (16-17)

Matrix: SOIL

Client Sample ID: LW041S (16-17)	Matrix: SOIL					
Analyses	Result	Limit	Qual Units	DF	Date Analyzed	
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>	
Diesel	ND	16.8	mg/Kg-dry	1	11/8/2004	
Lube Oil	ND	56.0	mg/Kg-dry	1	11/8/2004	
Surr: o-Terphenyl	95.1	50-150	%REC	1	11/8/2004	
NWTPH-GX		NWTPH-GX			Analyst: <b>tlf</b>	
Gasoline	ND	2.80	mg/Kg-dry	1	11/1/2004	
Surr: 4-Bromofluorobenzene	98.9	50-150	%REC	1	11/1/2004	
TOTAL METALS BY ICP		E6010			Analyst: <b>skc</b>	
Arsenic	2.21	1.61	mg/Kg	1	11/6/2004 11:00:32 PM	
Chromium	13.0	0.403	mg/Kg	1	11/6/2004 11:00:32 PM	
Copper	11.2	0.806	mg/Kg	1	11/6/2004 11:00:32 PM	
Lead	ND	1.61	mg/Kg	1	11/6/2004 11:00:32 PM	
Nickel	12.1	0.403	mg/Kg	1	11/6/2004 11:00:32 PM	
Zinc	44.1	0.806	mg/Kg	1	11/6/2004 11:00:32 PM	
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>	
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/7/2004 11:11:00 AM	
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/7/2004 11:11:00 AM	
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
2-Chlorophenol	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
2-Methylphenol	ND	133	μg/Kg	1	11/7/2004 11:11:00 AM	
2-Nitroaniline	ND	333	µg/Kg	1	11/7/2004 11:11:00 AM	
2-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
3-&4-Methylphenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
3-Nitroaniline	ND	333	µg/Kg	1	11/7/2004 11:11:00 AM	
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM	
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM	
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/7/2004 11:11:00 AM	
4-Chloroaniline	ND	200	μg/Kg	1	11/7/2004 11:11:00 AM	

CLIENT: Time Oil Co.				Lab Order:	0410156
Project: NW Terminal Additiona	l Well Insta	ill Phase III			
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: bda
4-Chlorophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 Af
4-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 11:11:00 A
4-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 11:11:00 A
Acenaphthene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Acenaphthylene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Anthracene	ND	66.7	µg/Kg	1	11/7/2004 11:11:00 AM
Benz(a)anthracene	ND	66.7	µg/Kg	1	11/7/2004 11:11:00 AM
Benzo(a)pyrene	ND	66.7	µg/Kg	1	11/7/2004 11:11:00 AM
Benzo(b)fluoranthene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Benzo(g,h,i)perylene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Benzo(k)fluoranthene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Benzoic Acid	ND	667	μg/Kg	1	11/7/2004 11:11:00 AM
Benzyl Alcohol	ND	333	μg/Kg	1	11/7/2004 11:11:00 AM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Bis(2-chloroethyl)ether	ND	133	μg/Kg	1	11/7/2004 11:11:00 AM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Bis(2-ethylhexyl)phthalate	190	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Butyl benzyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Carbazole	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Chrysene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Di-n-butyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Di-n-octyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Dibenz(a,h)anthracene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Dibenzofuran	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Diethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Dimethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Fluoranthene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Fluorene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Hexachlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AN
Hexachlorobutadiene	ND	133	μg/Kg	1	11/7/2004 11:11:00 AN
Hexachlorocyclopentadiene	ND	333	μg/Kg	1	11/7/2004 11:11:00 AN
Hexachloroethane	ND	133	μg/Kg	1	11/7/2004 11:11:00 AN
Indeno(1,2,3-cd)pyrene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Isophorone	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
N-Nitrosodi-n-propylamine	ND	133	μg/Kg	1	11/7/2004 11:11:00 AM
N-Nitrosodimethylamine	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
N-Nitrosodiphenylamine	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Naphthalene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Nitrobenzene	ND	66.7	μg/Kg	1	11/7/2004 11:11:00 AM
Pentachlorophenol	ND	333	μg/Kg μg/Kg	1	11/7/2004 11:11:00 AM
Phenanthrene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 11:11:00 AM
Phenol	ND	133	μg/Kg μg/Kg	1	11/7/2004 11:11:00 AM
	ND	66.7			11/7/2004 11:11:00 AN
Pyrene Sura 2.4.6 Tribromonband			μg/Kg	1	
Surr: 2,4,6-Tribromophenol	59.4	57.8-119	%REC	1	11/7/2004 11:11:00

CLIENT: Project:	Time Oil Co. NW Terminal Additional Well Install Phase III				Lab Order:	0410156	
SEMIVOLATILI	E ORGANICS BY GC/MS		SW8270D			Analyst: bda	
Surr: 2-Flu	orobiphenyl	82.9	52.6-93.2	%REC	1	11/7/2004 11:11:00 AM	
Surr: 2-Fluo	orophenol	64.7	40.7-111	%REC	1	11/7/2004 11:11:00 AM	
Surr: 4-Ter	phenyl-d14	78.7	49.8-118	%REC	1	11/7/2004 11:11:00 AM	
Surr: Nitrob	penzene-d5	59.8	44.8-103	%REC	1	11/7/2004 11:11:00 AM	
Surr: Pheno	ol-d6	70.1	47.5-117	%REC	1	11/7/2004 11:11:00 AM	

Date: 06-Dec-04

**CLIENT:** 

Time Oil Co.

Lab Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0410156-06

**Collection Date:** 10/28/2004 7:45:00 AM

Client Sa

LW042S (0-0.5)

Matrix

Client Sample ID: LW042S (0-0.5)		Matrix: SOIL						
Analyses	Result	Limit	Qual Units	DF	Date Analyzed			
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>			
Diesel	ND	17.2	mg/Kg-dry	1	11/8/2004			
Lube Oil	ND	57.5	mg/Kg-dry	1	11/8/2004			
Surr: o-Terphenyl	91.3	50-150	%REC	1	11/8/2004			
NWTPH-GX		NWTPH-GX			Analyst: <b>tlf</b>			
Gasoline	ND	2.87	mg/Kg-dry	1	11/1/2004			
Surr: 4-Bromofluorobenzene	100	50-150	%REC	1	11/1/2004			
TOTAL METALS BY ICP		E6010			Analyst: skc			
Arsenic	ND	1.72	mg/Kg	1	11/6/2004 11:05:53 PM			
Chromium	18.5	0.431	mg/Kg	1	11/6/2004 11:05:53 PM			
Copper	20.4	0.862	mg/Kg	1	11/6/2004 11:05:53 PM			
Lead	14.1	1.72	mg/Kg	1	11/6/2004 11:05:53 PM			
Nickel	23.5	0.431	mg/Kg	1	11/6/2004 11:05:53 PM			
Zinc	72.4	0.862	mg/Kg	1	11/6/2004 11:05:53 PM			
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>			
1,2,4-Trichlorobenzene	ND	66.7	µg/Kg	1	11/7/2004 4:15:00 PM			
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM			
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM			
1,4-Dichlorobenzene	ND	66.7	µg/Kg	1	11/7/2004 4:15:00 PM			
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/7/2004 4:15:00 PM			
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/7/2004 4:15:00 PM			
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM			
2-Chlorophenol	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM			
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM			
2-Methylphenol	ND	133	μg/Kg	1	11/7/2004 4:15:00 PM			
2-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
2-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
3-&4-Methylphenol	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
3-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/7/2004 4:15:00 PM			
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM			
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/7/2004 4:15:00 PM			
4-Chloroaniline	ND	200	μg/Kg	1	11/7/2004 4:15:00 PM			

CLIENT: Time Oil Co.  Project: NW Terminal Additiona	l Well Insta	ll Phase III		Lab Order:	0410156
		CW0270D			Applyate had
SEMIVOLATILE ORGANICS BY GC/MS  4-Chlorophenyl phenyl ether	ND	SW8270D 66.7	μg/Kg	1	Analyst: <b>bd</b> 11/7/2004 4:15:00 PN
4-Nitroaniline	ND	333	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
4-Nitrophenol	ND	333	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Acenaphthene	ND	66.7	µg/Kg µg/Kg	1	11/7/2004 4:15:00 PM
Acenaphthylene	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM
• •	ND	66.7		1	11/7/2004 4:15:00 PM
Anthracene Benz(a)anthracene	71.7	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
• •	119	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Benzo(a)pyrene Benzo(b)fluoranthene	156	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
	78.7	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Benzo(g,h,i)perylene	ND	66.7	· -	1	11/7/2004 4:15:00 PM
Benzo(k)fluoranthene Benzoic Acid	ND	667	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Benzyl Alcohol	ND	333	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Bis(2-chloroethyl)ether	ND ND	133	μg/Kg μg/Kg	, 1	11/7/2004 4:15:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Butyl benzyl phthalate	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Carbazole	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Chrysene	83.0	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Di-n-butyl phthalate	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Di-n-octyl phthalate	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Dibenz(a,h)anthracene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Dibenzofuran	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Diethyl phthalate	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Dimethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:15:00 PM
Fluoranthene	169	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Fluorene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Hexachlorobenzene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Hexachlorobutadiene	ND	133	μg/Kg	1	11/7/2004 4:15:00 PM
Hexachlorocyclopentadiene	ND	333	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Hexachloroethane	ND	133	μg/Kg μg/Kg	. 1	11/7/2004 4:15:00 PM
Indeno(1,2,3-cd)pyrene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
	ND	66.7		1	11/7/2004 4:15:00 PM
Isophorone N-Nitrosodi-n-propylamine	ND	133	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
N-Nitrosodimethylamine	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
N-Nitrosodiphenylamine	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Naphthalene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Nitrobenzene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Pentachlorophenol	ND	333	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Phenanthrene	ND	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Phenol	ND	133	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Pyrene	267	66.7	μg/Kg μg/Kg	1	11/7/2004 4:15:00 PM
Surr: 2,4,6-Tribromophenol	65.3	57.8-119	μg/Ng %REC	1	11/7/2004 4:15:00 PM

CLIENT: Project:					Lab Order:	0410156	
SEMIVOLATILE	E ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>	
Surr: 2-Fluo	orobiphenyl	73.0	52.6-93.2	%REC	1	11/7/2004 4:15:00 PM	
Surr: 2-Fluo	orophenol	54.9	40.7-111	%REC	1	11/7/2004 4:15:00 PM	
Surr: 4-Ter	phenyl-d14	79.0	49.8-118	%REC	1	11/7/2004 4:15:00 PM	
Surr: Nitrob	penzene-d5	51.0	44.8-103	%REC	1	11/7/2004 4:15:00 PM	
Surr: Pheno	ol-d6	60.2	47.5-117	%REC	1	11/7/2004 4:15:00 PM	

**Date:** 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-07 **Collection Date:** 10/28/2004 7:50:00 AM

Client Sample ID: LW042S (1-1.5) Matrix: SOIL

Client Sample ID: LW042S (1-1.5)			-4			
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	66.0	17.0	Α1	mg/Kg-dry	1	11/10/2004
Lube Oil	221	56.8	A2	mg/Kg-dry	1	11/10/2004
Surr: o-Terphenyl	94.5	50-150		%REC	1	11/10/2004
NWTPH-GX		NWTPH-GX				Analyst: tlf
Gasoline	ND	2.84		mg/Kg-dry	1	11/1/2004
Surr: 4-Bromofluorobenzene	97.6	50-150		%REC	1	11/1/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.52		mg/Kg	1	11/6/2004 11:11:14 PM
Chromium	26.3	0.379		mg/Kg	1	11/6/2004 11:11:14 PM
Copper	21.7	0.758		mg/Kg	1	11/6/2004 11:11:14 PM
Lead	33.0	1.52		mg/Kg	1	11/6/2004 11:11:14 PM
Nickel	18.3	0.379		mg/Kg	1	11/6/2004 11:11:14 PM
Zinc	106	7.58		mg/Kg	10	11/9/2004 6:37:37 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 4:46:00 PM
1,2-Dichlorobenzene	ND	66.7		µg/Kg	1	11/7/2004 4:46:00 PM
1,3-Dichlorobenzene	ND	66.7		µg/Kg	1	11/7/2004 4:46:00 PM
1,4-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 4:46:00 PM
2,4,5-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
2,4,6-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
2,4-Dichlorophenol	ND	200		μg/Kg	1	11/7/2004 4:46:00 PM
2,4-Dimethylphenol	ND	200		μg/Kg	1	11/7/2004 4:46:00 PM
2,4-Dinitrophenol	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
2,4-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
2,6-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
2-Chloronaphthalene	ND	66.7		μg/Kg	1	11/7/2004 4:46:00 PM
2-Chlorophenol	ND	66.7		µg/Kg	1	11/7/2004 4:46:00 PM
2-Methylnaphthalene	ND	66.7		μg/Kg	. 1	11/7/2004 4:46:00 PM
2-Methylphenol	ND	133		μg/Kg	1	11/7/2004 4:46:00 PM
2-Nitroaniline	ND	333		µg/Kg	1	11/7/2004 4:46:00 PM
2-Nitrophenol	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
3,3-Dichlorobenzidine	ND	333		µg/Kg	1	11/7/2004 4:46:00 PM
3-&4-Methylphenol	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
3-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
4,6-Dinitro-2-methylphenol	ND	333		μg/Kg	1	11/7/2004 4:46:00 PM
4-Bromophenyl phenyl ether	ND	66.7		μg/Kg	1	11/7/2004 4:46:00 PM
4-Chloro-3-methylphenol	ND	133		μg/Kg	1	11/7/2004 4:46:00 PM
4-Chloroaniline	ND	200		μg/Kg	1	11/7/2004 4:46:00 PM

CLIENT: Time Oil Co.		11 101		Lab Order:	0410156
Project: NW Terminal Addition	al Well Insta	III Phase III			
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bd</b>
4-Chlorophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
4-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 4:46:00 PM
4-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 4:46:00 PM
Acenaphthene	67.0	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Acenaphthylene	368	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Anthracene	471	66.7	µg/Kg	1	11/7/2004 4:46:00 PM
Benz(a)anthracene	3180	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Benzo(a)pyrene	5010	667	μg/Kg	10	11/8/2004 6:23:00 PM
Benzo(b)fluoranthene	5820	667	μg/Kg	10	11/8/2004 6:23:00 PM
Benzo(g,h,i)perylene	2200	66.7	μg/Kg	1	11/8/2004 5:53:00 PM
Benzo(k)fluoranthene	1550	66.7	μg/Kg	1	11/8/2004 5:53:00 PM
Benzoic Acid	ND	667	μg/Kg	1	11/7/2004 4:46:00 PM
Benzyl Alcohol	ND	333	μg/Kg	1	11/7/2004 4:46:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Bis(2-chloroethyl)ether	ND	133	μg/Kg	1	11/7/2004 4:46:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Butyl benzyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Carbazole	81.7	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Chrysene	4090	667	μg/Kg	10	11/8/2004 6:23:00 PM
Di-n-butyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Di-n-octyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Dibenz(a,h)anthracene	479	66.7	μg/Kg	1	11/8/2004 5:53:00 PM
Dibenzofuran	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Diethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Dimethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Fluoranthene	9800	667	μg/Kg	10	11/8/2004 6:23:00 PM
Fluorene	129	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Hexachlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Hexachlorobutadiene	ND	133	μg/Kg	1	11/7/2004 4:46:00 PM
Hexachlorocyclopentadiene	ND	333	μg/Kg	1	11/7/2004 4:46:00 PM
Hexachloroethane	ND	133	μg/Kg	1	11/7/2004 4:46:00 PM
Indeno(1,2,3-cd)pyrene	1840	66.7	μg/Kg	1	11/8/2004 5:53:00 PM
Isophorone	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
N-Nitrosodi-n-propylamine	ND	133	μg/Kg	1	11/7/2004 4:46:00 PM
N-Nitrosodimethylamine	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
N-Nitrosodiphenylamine	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Naphthalene	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Nitrobenzene	ND	66.7	μg/Kg	1	11/7/2004 4:46:00 PM
Pentachlorophenol	ND	333	μg/Kg	1	11/7/2004 4:46:00 PM
Phenanthrene	2700	66.7	μg/Kg μg/Kg	1	11/7/2004 4:46:00 PM
Phenol	ND	133	μg/Kg μg/Kg	1	11/7/2004 4:46:00 PM
Pyrene	11100	667	μg/Kg μg/Kg	10	11/8/2004 4:48:00 PM
Surr: 2,4,6-Tribromophenol	68.1	57.8-119	μg/Ng %REC	10	11/7/2004 4:46:00 PM

CLIENT: Project:	Time Oil Co.  NW Terminal Additional Well Install Phase III						0410156
SEMIVOLATILI	E ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Surr: 2-Flu	orobiphenyl	69.6	52.6-93.2		%REC	1	11/7/2004 4:46:00 PM
Surr: 2-Fluo	orophenol	43.8	40.7-111		%REC	1	11/7/2004 4:46:00 PM
Surr: 4-Ter	phenyl-d14	99.0	49.8-118		%REC	1	11/7/2004 4:46:00 PM
Surr: Nitrot	oenzene-d5	43.7	44.8-103	S	%REC	1	11/7/2004 4:46:00 PM
Surr: Pheno	ol-d6	54.9	47.5-117		%REC	1	11/7/2004 4:46:00 PM

**Date:** 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-08 **Collection Date:** 10/28/2004 8:05:00 AM

Client Sample ID: LW042S (5-5.5) Matrix: SOIL

Cheff Sample 1D. (3-3.3)		Matrix. SOIL								
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed				
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>				
Diesel	ND	16.5	HT	mg/Kg-dry	1	12/2/2004				
Lube Oil	ND	55.0	HT	mg/Kg-dry	1	12/2/2004				
Surr: o-Terphenyl	89.3	50-150		%REC	1	12/2/2004				
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>				
1,2,4-Trichlorobenzene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
1,2-Dichlorobenzene	ND	66.7	нт	μg/Kg	1	12/1/2004 2:58:00 PM				
1,3-Dichlorobenzene	ND	66.7	HT	µg/Kg	1	12/1/2004 2:58:00 PM				
1,4-Dichlorobenzene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,4,5-Trichlorophenol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,4,6-Trichlorophenol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,4-Dichlorophenol	ND	200	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,4-Dimethylphenol	ND	200	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,4-Dinitrophenol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,4-Dinitrotoluene	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2,6-Dinitrotoluene	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2-Chloronaphthalene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2-Chlorophenol	ND	66.7	HT	µg/Kg	1	12/1/2004 2:58:00 PM				
2-Methylnaphthalene	ND	66.7	HT	µg/Kg	1	12/1/2004 2:58:00 PM				
2-Methylphenol	ND	133	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2-Nitroaniline	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
2-Nitrophenol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
3,3-Dichlorobenzidine	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
3-&4-Methylphenol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
3-Nitroaniline	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4,6-Dinitro-2-methylphenol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4-Bromophenyl phenyl ether	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4-Chloro-3-methylphenol	ND	133	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4-Chloroaniline	ND	200	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4-Chlorophenyl phenyl ether	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4-Nitroaniline	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
4-Nitrophenol	ND	333	нт	μg/Kg	1	12/1/2004 2:58:00 PM				
Acenaphthene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
Acenaphthylene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
Anthracene	ND	66.7	нт	μg/Kg	1	12/1/2004 2:58:00 PM				
Benz(a)anthracene	ND	66.7	нт	μg/Kg	1	12/1/2004 2:58:00 PM				
Benzo(a)pyrene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM				
Benzo(b)fluoranthene	ND	66.7	НТ	μg/Kg	1	12/1/2004 2:58:00 PM				
Benzo(g,h,i)perylene	ND	66.7	нт	μg/Kg	1	12/1/2004 2:58:00 PM				
Benzo(k)fluoranthene	ND	66.7	НТ	μg/Kg	1	12/1/2004 2:58:00 PM				

CLIENT: Project:	Time Oil Co.  NW Terminal Additiona	l Well Ing	tall Dhasa III			Lab Order:	0410156
Troject.	NW Terrimial Additiona	i wen ms	ian Thase III				
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Benzoic Acid		ND	667	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Benzyl Alcohol		ND	333	HT	µg/Kg	1	12/1/2004 2:58:00 PM
Bis(2-chloroeth	oxy)methane	ND	66.7	HT	µg/Kg	1	12/1/2004 2:58:00 PM
Bis(2-chloroeth	yl)ether	ND	133	HT	µg/Kg	1	12/1/2004 2:58:00 PM
Bis(2-chloroiso	propyl)ether	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Bis(2-ethylhexy	rl)phthalate	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Butyl benzyl ph	thalate	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Carbazole		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Chrysene		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Di-n-butyl phtha	alate	ND	66.7	HT	µg/Kg	1	12/1/2004 2:58:00 PM
Di-n-octyl phtha	alate	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Dibenz(a,h)antl	nracene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Dibenzofuran		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Diethyl phthalat	е	331	66.7	внт	μg/Kg	1	12/1/2004 2:58:00 PM
Dimethyl phthal	ate	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Fluoranthene		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Fluorene		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Hexachloroben	zene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Hexachlorobuta	idiene	ND	133	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Hexachlorocycl	opentadiene	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Hexachloroetha	ine	ND	133	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Indeno(1,2,3-co	l)pyrene	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Isophorone		ND	66.7	нт	μg/Kg	1	12/1/2004 2:58:00 PM
N-Nitrosodi-n-pi	ropylamine	ND	133	HT	μg/Kg	1	12/1/2004 2:58:00 PM
N-Nitrosodimeth	ylamine	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
N-Nitrosodipher	nylamine	ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Naphthalene		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Nitrobenzene		ND	66.7	нт	μg/Kg	1	12/1/2004 2:58:00 PM
Pentachlorophe	nol	ND	333	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Phenanthrene		ND	66.7	HT	μg/Kg	1	12/1/2004 2:58:00 PM
Phenol		ND	133	НТ	μg/Kg	1	12/1/2004 2:58:00 PM
Pyrene		ND	66.7	НТ	μg/Kg	1	12/1/2004 2:58:00 PM
•	ribromophenol	72.2	57.8-119		%REC	1	12/1/2004 2:58:00 PM
Surr: 2-Fluor	· ·	89.7	52.6-93.2		%REC	1	12/1/2004 2:58:00 PM
Surr: 2-Fluor	• •	88.0	40.7-111		%REC	1	12/1/2004 2:58:00 PM
Surr: 4-Terph	·	80.7	49.8-118		%REC	1	12/1/2004 2:58:00 PM
Surr: Nitrobe	•	82.2	44.8-103		%REC	1	12/1/2004 2:58:00 PM
Surr: Phenol-		88.5	47.5-117		%REC	1	12/1/2004 2:58:00 PM

**Date:** 06-Dec-04

**CLIENT:** 

Time Oil Co.

Lab Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0410156-09

**Collection Date:** 10/28/2004 8:25:00 AM

I W042S (13-14)

Matrix: SOII

Client Sample ID: LW042S (13-14)				Matri	x: SOIL	
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	4750	16.3		mg/Kg-dry	1	11/8/2004
Lube Oil	ND	54.5	А3	mg/Kg-dry	1	11/8/2004
Surr: o-Terphenyl	368	50-150	S,MI	%REC	1	11/8/2004
NWTPH-GX		NWTPH-GX				Analyst: tlf
Gasoline	705	27.2		mg/Kg-dry	10	11/1/2004
Surr: 4-Bromofluorobenzene	26.8	50-150	S,D	%REC	10	11/1/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.61		mg/Kg	1	11/8/2004 6:01:15 PM
Chromium	12.4	0.403		mg/Kg	1	11/8/2004 6:01:15 PM
Copper	10.8	0.806		mg/Kg	1	11/6/2004 11:32:53 PM
Lead	ND	1.61		mg/Kg	1	11/6/2004 11:32:53 PM
Nickel	12.1	0.403		mg/Kg	1	11/6/2004 11:32:53 PM
Zinc	42.2	0.806		mg/Kg	1	11/6/2004 11:32:53 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
1,2-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
1,3-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
1,4-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
2,4,5-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
2,4,6-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
2,4-Dichlorophenol	ND	200		µg/Kg	1	11/7/2004 11:41:00 AM
2,4-Dimethylphenol	ND	200		μg/Kg	1	11/7/2004 11:41:00 AM
2,4-Dinitrophenol	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
2,4-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
2,6-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
2-Chloronaphthalene	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
2-Chlorophenol	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
2-Methylnaphthalene	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
2-Methylphenol	ND	133		μg/Kg	1	11/7/2004 11:41:00 AM
2-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
2-Nitrophenol	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
3,3-Dichlorobenzidine	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
3-&4-Methylphenol	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
3-Nitroaniline	ND	333		µg/Kg	1	11/7/2004 11:41:00 AM
4,6-Dinitro-2-methylphenol	ND	333		μg/Kg	1	11/7/2004 11:41:00 AM
4-Bromophenyl phenyl ether	ND	66.7		μg/Kg	1	11/7/2004 11:41:00 AM
4-Chloro-3-methylphenol	ND	133		μg/Kg	1	11/7/2004 11:41:00 AM
4-Chloroaniline	ND	200		μg/Kg 、	1	11/7/2004 11:41:00 AM

	ne Oil Co. / Terminal Additiona	1 Well Inst	all Phace III			Lab Order:	0410	156	
rroject: NW	Terminal Additiona	i wen msa	in Phase III						
SEMIVOLATILE ORGA			SW8270D					alyst: <b>b</b>	
4-Chlorophenyl phenyl	ether	ND	66.7		μg/Kg	1	11/7/2004 1		
4-Nitroaniline		ND	333		μg/Kg	1	11/7/2004 1		
4-Nitrophenol		ND	333		µg/Kg	1	11/7/2004 1		
Acenaphthene		ND	66.7		µg/Kg	1	11/7/2004 1		
Acenaphthylene		ND	66.7		μg/Kg	1	11/7/2004 1	1:41:00	A۱
Anthracene		ND	66.7		μg/Kg	1	11/7/2004 1	1:41:00	A۱
Benz(a)anthracene		ND	66.7		μg/Kg	1	11/7/2004 1	1:41:00	A۱
Benzo(a)pyrene		ND	66.7		μg/Kg	1	11/7/2004 1	1:41:00	A۱
Benzo(b)fluoranthene		ND	66.7		μg/Kg	1	11/7/2004 1	1:41:00	A۱
Benzo(g,h,i)perylene		ND	66.7		μg/Kg	1	11/7/2004 1		
Benzo(k)fluoranthene		ND	66.7		µg/Kg	1	11/7/2004 1	1:41:00	ΑN
Benzoic Acid		ND	667		µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Benzyl Alcohol		ND	333		µg/Kg	1	11/7/2004 1	1:41:00	A٨
Bis(2-chloroethoxy)me	thane	ND	66.7		µg/Kg	1	11/7/2004 1	1:41:00	A٨
Bis(2-chloroethyl)ether		ND	133		µg/Kg	<sub>.</sub> 1	11/7/2004 1	1:41:00	A٨
Bis(2-chloroisopropyl)	ether	ND,	66.7		μg/Kg	1	11/7/2004 1	1:41:00	A٨
Bis(2-ethylhexyl)phthal	ate	ND	66.7		µg/Kg	1	11/7/2004 1	1:41:00	ΑN
Butyl benzyl phthalate		ND	66.7		µg/Kg	1	11/7/2004 1	1:41:00	ΑN
Carbazole		ND	66.7	1	µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Chrysene		ND	66.7	1	µg/Kg	1	11/7/2004 1	1:41:00	A٨
Di-n-butyl phthalate		ND	66.7	1	μg/Kg	1	11/7/2004 1	1:41:00	Αħ
Di-n-octyl phthalate		ND	66.7	I	µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Dibenz(a,h)anthracene		ND	66.7	1	µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Dibenzofuran		ND	66.7	1	µg/Kg	1	11/7/2004 1	1:41:00	ΑN
Diethyl phthalate		ND	66.7	ı	µg/Kg	1	11/7/2004 1	1:41:00	ΑN
Dimethyl phthalate		ND	66.7	i	µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Fluoranthene		102	66.7	ı	µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Fluorene		1460	66.7	1	µg/Kg	1	11/7/2004 1	1:41:00	ΑN
Hexachlorobenzene		ND	66.7	ļ	µg/Kg	1	11/7/2004 1	1:41:00	ΑM
Hexachlorobutadiene		ND	133	ı	ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Hexachlorocyclopentac	liene	ND	333	ı	ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Hexachloroethane		ND	133	ļ	ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Indeno(1,2,3-cd)pyrene		ND	66.7	1	ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Isophorone		ND	66.7	ŀ	ug/Kg	1	11/7/2004 1	1:41:00	ΑM
N-Nitrosodi-n-propylami	ne	ND	133	ŀ	ug/Kg	1	11/7/2004 1	1:41:00	ΑM
N-Nitrosodimethylamine		ND	66.7		ug/Kg	1	11/7/2004 1	1:41:00	ΑM
N-Nitrosodiphenylamine		ND	66.7		ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Naphthalene		ND	66.7		ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Nitrobenzene		ND	66.7		ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Pentachlorophenol		ND	333		ug/Kg	1	11/7/2004 1	1:41:00	ΑM
Phenanthrene		2980	66.7		ıg/Kg	1	11/7/2004 11		
Phenol		ND	133		ıg/Kg	1	11/7/2004 11		
Pyrene		127	66.7		ıg/Kg	1	11/7/2004 11		
Surr: 2,4,6-Tribromor	henol	137	57.8-119		%REC	1	11/7/2004 11		

CLIENT:	Time Oil Co.					Lab Order:	0410156
Project:	NW Terminal Additional	Well Inst	all Phase III				
SEMIVOLATIL	E ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Surr: 2-Flu	orobiphenyl	91.6	52.6-93.2		%REC	1	11/7/2004 11:41:00 AM
Surr: 2-Flu	orophenol	70.8	40.7-111		%REC	1	11/7/2004 11:41:00 AM
Surr: 4-Ter	phenyl-d14	82.7	49.8-118		%REC	1	11/7/2004 11:41:00 AN
Surr: Nitrob	penzene-d5	94.6	44.8-103		%REC	1	11/7/2004 11:41:00 AN
Surr: Pheno	ol-d6	72.2	47.5-117		%REC	1	11/7/2004 11:41:00 AN
VOLATILES B	Y GC/MS		SW8260B				Analyst: <b>seb</b>
1,1,1,2-Tetrac	chloroethane	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,1,1-Trichlord	pethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,1,2,2-Tetrac	chloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,1,2-Trichlord	pethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,1-Dichloroet	hane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,1-Dichloroet	hene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,1-Dichloropr	ropene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,2,3-Trichlord	obenzene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,2,3-Trichlord	opropane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,2,4-Trichlord	obenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,2,4-Trimethy	/lbenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,2-Dibromo-3	3-chloropropane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,2-Dibromoet	hane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,2-Dichlorobe	enzene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,2-Dichloroet	hane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,2-Dichloropr	opane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,3,5-Trimethy	/lbenzene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,3-Dichlorobe	enzene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
1,3-Dichloropr	opane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
1,4-Dichlorobe	enzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
2,2-Dichloropr	opane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
2-Butanone		ND	40.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
2-Chlorotoluer	ne	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
2-Hexanone		37.8	20.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
4-Chlorotoluer	ne	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
4-Isopropyltolu	uene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
4-Methyl-2-per	ntanone	ND	40.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Acetone		ND	100	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Benzene		ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Bromobenzen	е	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Bromochlorom	ethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Bromodichloro	methane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Bromoform		ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Bromomethan	e	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Carbon disulfic	de	ND	10.0	ΗT	μg/Kg	1	12/2/2004 2:19:00 AM
Carbon tetrach	nloride	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Chlorobenzene	е	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Chloroethane		ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM

CLIENT: Time Oil Co.					Lab Order:	0410156
Project: NW Terminal	Additional Well Inst	all Phase III				
VOLATILES BY GC/MS		SW8260B				Analyst: <b>seb</b>
Chloroform	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Chloromethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
cis-1,2-Dichloroethene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
cís-1,3-Dichloropropene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Dibromochloromethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Dibromomethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Dichlorodifluoromethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Ethylbenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Hexachlorobutadiene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
isopropylbenzene	58.4	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
m,p-Xylene	ND	20.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Methyl tert-butyl ether	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Methylene chloride	53.8	50.0	P,HT	μg/Kg	1	12/2/2004 2:19:00 AM
n-Butylbenzene	1170	100	HT	µg/Kg	10	12/2/2004 12:36:00 AM
n-Propylbenzene	471	100	HT	µg/Kg	10	12/2/2004 12:36:00 AM
Naphthalene	44.0	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
o-Xylene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
sec-Butylbenzene	193	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Styrene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
tert-Butylbenzene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Tetrachloroethene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Toluene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
trans-1,2-Dichloroethene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
trans-1,3-Dichloropropene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Trichloroethene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Trichlorofluoromethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:19:00 AM
Vinyl chloride	ND	10.0	HT	µg/Kg	1	12/2/2004 2:19:00 AM
Surr: 1,2-Dichloroethane-d4	74.1	71.5-112	HT	%REC	1	12/2/2004 2:19:00 AM
Surr: 4-Bromofluorobenzene	102	75.7-122	HT	%REC	1	12/2/2004 2:19:00 AM
Surr: Dibromofluoromethane	71.3	64.3-124	HT	%REC	1	12/2/2004 2:19:00 AM
Surr: Toluene-d8	78.0	74.9-120	HT	%REC	1	12/2/2004 2:19:00 AM

**Date:** 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-10 **Collection Date:** 10/28/2004 2:35:00 PM

Client Sample ID: LW043S (0-0.5) Matrix: SOIL

Chent Sample ID: LW0438 (0-0.5)				Matri	x: SOIL	
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	44.9	17.1	A1	mg/Kg-dry	1	11/10/2004
Lube Oil	79.5	57.0	A2	mg/Kg-dry	1	11/10/2004
Surr: o-Terphenyl	87.2	50-150		%REC	1	11/10/2004
NWTPH-GX		NWTPH-GX				Analyst: <b>tlf</b>
Gasoline	18.2	2.85		mg/Kg-dry	1	11/1/2004
Surr: 4-Bromofluorobenzene	109	50-150		%REC	1	11/1/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.72		mg/Kg	1	11/8/2004 6:06:33 PM
Chromium	146	21.6		mg/Kg	50	11/9/2004 6:42:58 PM
Copper	35.7	0.862		mg/Kg	1	11/6/2004 11:38:14 PM
Lead	141	1.72		mg/Kg	1	11/6/2004 11:38:14 PM
Nickel	40.5	21.6		mg/Kg	50	11/9/2004 6:42:58 PM
Zinc	156	8.62		mg/Kg	10	11/9/2004 6:48:24 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
1,2-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
1,3-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
1,4-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
2,4,5-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
2,4,6-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
2,4-Dichlorophenol	ND	200		μg/Kg	1	11/7/2004 5:16:00 PM
2,4-Dimethylphenol	ND	200		μg/Kg	1	11/7/2004 5:16:00 PM
2,4-Dinitrophenol	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
2,4-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
2,6-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
2-Chloronaphthalene	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
2-Chlorophenol	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
2-Methylnaphthalene	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
2-Methylphenol	ND	133		μg/Kg	1	11/7/2004 5:16:00 PM
2-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
2-Nitrophenol	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
3,3-Dichlorobenzidine	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
3-&4-Methylphenol	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
3-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
4,6-Dinitro-2-methylphenol	ND	333		μg/Kg	1	11/7/2004 5:16:00 PM
4-Bromophenyl phenyl ether	ND	66.7		μg/Kg	1	11/7/2004 5:16:00 PM
4-Chloro-3-methylphenol	ND	133		μg/Kg	1	11/7/2004 5:16:00 PM
4-Chloroaniline	ND	200		μg/Kg	1	11/7/2004 5:16:00 PM

CLIENT: Time Oil Co.				Lab Order:	0410156
Project: NW Terminal Additiona	l Well Insta	ll Phase III			
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bd</b> a
4-Chlorophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
4-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 5:16:00 PM
4-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 5:16:00 PM
Acenaphthene	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Acenaphthylene	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Anthracene	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Benz(a)anthracene	201	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Benzo(a)pyrene	295	66.7	μg/Kg	1	11/8/2004 6:53:00 PM
Benzo(b)fluoranthene	393	66.7	μg/Kg	1	11/8/2004 6:53:00 PM
Benzo(g,h,i)perylene	203	66.7	μg/Kg	1	11/8/2004 6:53:00 PM
Benzo(k)fluoranthene	117	66.7	μg/Kg	1	11/8/2004 6:53:00 PM
Benzoic Acid	ND	667	μg/Kg	1	11/7/2004 5:16:00 PM
Benzyl Alcohol	ND	333	μg/Kg	1	11/7/2004 5:16:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Bis(2-chloroethyl)ether	ND	133	μg/Kg	1	11/7/2004 5:16:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Bis(2-ethylhexyl)phthalate	70.0	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Butyl benzyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Carbazole	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Chrysene	235	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Di-n-butyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Di-n-octyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Dibenz(a,h)anthracene	ND	66.7	μg/Kg	1	11/8/2004 6:53:00 PM
Dibenzofuran	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Diethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Dimethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Fluoranthene	502	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Fluorene	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Hexachlorobenzene	ND	66.7	µg/Kg	1	11/7/2004 5:16:00 PM
Hexachlorobutadiene	ND	133	μg/Kg	1	11/7/2004 5:16:00 PM
Hexachlorocyclopentadiene	ND	333	μg/Kg	1	11/7/2004 5:16:00 PM
Hexachloroethane	ND	133	μg/Kg	1	11/7/2004 5:16:00 PM
Indeno(1,2,3-cd)pyrene	158	66.7	μg/Kg	1	11/8/2004 6:53:00 PM
Isophorone	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
N-Nitrosodi-n-propylamine	ND	133	μg/Kg	1	11/7/2004 5:16:00 PM
N-Nitrosodimethylamine	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
N-Nitrosodiphenylamine	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Naphthalene	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Nitrobenzene	ND	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Pentachlorophenol	ND	333	μg/Kg	1	11/7/2004 5:16:00 PM
Phenanthrene	171	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Phenol	ND	133	μg/Kg μg/Kg	1	11/7/2004 5:16:00 PM
Pyrene	792	66.7	μg/Kg	1	11/7/2004 5:16:00 PM
Surr: 2,4,6-Tribromophenol	63.5	57.8-119	%REC	1	11/7/2004 5:16:00 PM

CLIENT:	Time Oil Co.					Lab Order:	0410156
Project:	NW Terminal Additiona	Well Inst	all Phase III				
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D				Analyst: bda
Surr: 2-Fluo	probiphenyl	66.6	52.6-93.2		%REC	1	11/7/2004 5:16:00 PM
Surr: 2-Fluo	prophenol	54.9	40.7-111		%REC	1	11/7/2004 5:16:00 PM
Surr: 4-Terp	phenyl-d14	81.0	49.8-118		%REC	1	11/7/2004 5:16:00 PM
Surr: Nitrob	enzene-d5	47.9	44.8-103		%REC	1	11/7/2004 5:16:00 PM
Surr: Pheno	ol-d6	58.4	47.5-117		%REC	1	11/7/2004 5:16:00 PM
VOLATILES BY	Y GC/MS		SW8260B				Analyst: <b>seb</b>
1,1,1,2-Tetrach	hloroethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,1,1-Trichloro	ethane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
1,1,2,2-Tetrach	nloroethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,1,2-Trichloro	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,1-Dichloroeth	nane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,1-Dichloroeth	nene	ND	10.0	нт	μg/Kg	1	12/1/2004 9:11:00 PM
1,1-Dichloropro	opene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2,3-Trichloro	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2,3-Trichloro	propane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
1,2,4-Trichloro	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2,4-Trimethyl	lbenzene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
1,2-Dibromo-3-	-chloropropane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2-Dibromoeth	nane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2-Dichlorobe	nzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2-Dichloroeth	nane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,2-Dichloropro	opane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
1,3,5-Trimethyl	benzene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
1,3-Dichlorobe	nzene	ND	10.0	HT,	μg/Kg	1	12/1/2004 9:11:00 PM
1,3-Dichloropro	opane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
1,4-Dichlorobe	nzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
2,2-Dichloropro	opane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
2-Butanone		ND	40.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
2-Chlorotoluene	e	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
2-Hexanone		ND	20.0	HŢ	μg/Kg	1	12/1/2004 9:11:00 PM
4-Chlorotoluene	e	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
4-Isopropyltolu	ene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
4-Methyl-2-pen	ntanone	ND	40.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Acetone		ND	100	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Benzene		ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Bromobenzene	e	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Bromochlorome	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Bromodichloron	methane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Bromoform		ND	10.0	НТ	μg/Kg	1	12/1/2004 9:11:00 PM
Bromomethane	)	ND	10.0	нт	μg/Kg	1	12/1/2004 9:11:00 PM
Carbon disulfid	e	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Carbon tetrach	loride	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Chlorobenzene	<b>;</b>	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Chloroethane		ND	10.0	НΤ	μg/Kg	1	12/1/2004 9:11:00 PM

CLIENT: Time Oil	Co.				Lab Order:	0410156
Project: NW Terr	ninal Additional Well Inst	tall Phase III				
VOLATILES BY GC/MS		SW8260B				Analyst: <b>seb</b>
Chloroform	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Chloromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
cis-1,2-Dichloroethene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
cis-1,3-Dichloropropene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Dibromochloromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Dibromomethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Dichlorodifluoromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Ethylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Hexachlorobutadiene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Isopropylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
m,p-Xylene	ND	20.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Methyl tert-butyl ether	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Methylene chloride	71.0	50.0	P,HT	μg/Kg	1	12/1/2004 9:11:00 PM
n-Butylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
n-Propylbenzene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Naphthalene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
o-Xylene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
sec-Butylbenzene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Styrene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
tert-Butylbenzene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Tetrachloroethene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Toluene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
trans-1,2-Dichloroethene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
trans-1,3-Dichloropropene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:11:00 PM
Trichloroethene	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Trichlorofluoromethane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Vinyl chloride	ND	10.0	HT	µg/Kg	1	12/1/2004 9:11:00 PM
Surr: 1,2-Dichloroethane-d	4 77.8	71.5-112	HT	%REC	1	12/1/2004 9:11:00 PM
Surr: 4-Bromofluorobenzer	ne 91.0	75.7-122	HT	%REC	1	12/1/2004 9:11:00 PM
Surr: Dibromofluoromethar	e 72.7	64.3-124	HT	%REC	1	12/1/2004 9:11:00 PM
Surr: Toluene-d8	77.9	74.9-120	HT	%REC	1	12/1/2004 9:11:00 PM

Date: 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-11 **Collection Date:** 10/28/2004 2:40:00 PM

Client Sample ID: LW043S (1-1.5) Matrix: SOIL

Client Sample ID: LW043S (1-1.5)			Ma	itrix: SOIL	
Analyses	Result	Limit	Qual Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>
Diesel	36.5	17.0	mg/Kg-dry	1	11/8/2004
Lube Oil	ND	56.6	mg/Kg-dry	1	11/8/2004
Surr: o-Terphenyl	93.4	50-150	%REC	1	11/8/2004
NWTPH-GX		NWTPH-GX			Analyst: tlf
Gasoline	3.54	2.83	mg/Kg-dry	1	11/1/2004
Surr: 4-Bromofluorobenzene	103	50-150	%REC	1	11/1/2004
TOTAL METALS BY ICP		E6010			Analyst: skc
Arsenic	ND	1.56	mg/Kg	1	11/8/2004 6:11:49 PM
Chromium	29.2	0.391	mg/Kg	1	11/8/2004 6:11:49 PM
Copper	19.3	0.781	mg/Kg	1	11/6/2004 11:43:33 PM
Lead	16.6	1.56	mg/Kg	1	11/6/2004 11:43:33 PM
Nickel	18.5	0.391	mg/Kg	1	11/6/2004 11:43:33 PM
Zinc	91.9	7.81	mg/Kg	10	11/9/2004 7:10:03 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/7/2004 12:12:00 PM
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/7/2004 12:12:00 PM
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
2-Chlorophenol	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
2-Methylphenol	ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
2-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
2-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
3-&4-Methylphenol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
3-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
4-Chloroaniline	ND	200	μg/Kg	1	11/7/2004 12:12:00 PM

CLIENT:	Time Oil Co.				Lab Order:	0410156
Project:	NW Terminal Additional	l Well Insta	Ill Phase III			
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
4-Chlorophenyl	phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
4-Nitroaniline		ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
4-Nitrophenol		ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
Acenaphthene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Acenaphthylen	е	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Anthracene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Benz(a)anthrac	cene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Benzo(a)pyren	e	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Benzo(b)fluora	nthene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Benzo(g,h,i)per	rylene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Benzo(k)fluora	nthene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Benzoic Acid		ND	667	μg/Kg	1	11/7/2004 12:12:00 PM
Benzyl Alcohol		ND	333	μg/Kg	<sup>,</sup> 1	11/7/2004 12:12:00 PM
Bis(2-chloroeth	oxy)methane	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Bis(2-chloroeth	yl)ether	ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
Bis(2-chloroiso	propyl)ether	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Bis(2-ethylhexy	l)phthalate	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Butyl benzyl ph	thalate	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Carbazole		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Chrysene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Di-n-butyl phtha	alate	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Di-n-octyl phtha	alate	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Dibenz(a,h)anth	nracene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Dibenzofuran		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Diethyl phthalate	e	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Dimethyl phthala	ate	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Fluoranthene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Fluorene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Hexachlorobena	zene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Hexachlorobuta	diene	ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
Hexachlorocycle	opentadiene	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
Hexachloroetha	ne	ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
Indeno(1,2,3-cc	l)pyrene	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Isophorone		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
N-Nitrosodi-n-pr	opylamine	ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
N-Nitrosodimeth	ylamine	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
N-Nitrosodiphen	ylamine	ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Naphthalene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Nitrobenzene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Pentachlorophe	nol	ND	333	μg/Kg	1	11/7/2004 12:12:00 PM
Phenanthrene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
Phenol		ND	133	μg/Kg	1	11/7/2004 12:12:00 PM
Pyrene		ND	66.7	μg/Kg	1	11/7/2004 12:12:00 PM
<del>-</del>	ribromophenol	59.0	57.8-119	%REC	1	11/7/2004 12:12:00 PM

CLIENT:	Time Oil Co.		11 151 111			Lab Order:	0410156
Project:	NW Terminal Additional	l Well Inst	all Phase III				
SEMIVOLATILE	E ORGANICS BY GC/MS		SW8270D				Analyst: bda
Surr: 2-Fluo	orobiphenyl	70.6	52.6-93.2		%REC	1	11/7/2004 12:12:00 PM
Surr: 2-Fluo	prophenol	55.3	40.7-111		%REC	1	11/7/2004 12:12:00 PM
Surr: 4-Terp	phenyl-d14	69.5	49.8-118		%REC	1	11/7/2004 12:12:00 PM
Surr: Nitrob	enzene-d5	54.0	44.8-103		%REC	1	11/7/2004 12:12:00 PM
Surr: Pheno	ol-d6	61.2	47.5-117		%REC	1	11/7/2004 12:12:00 PM
OLATILES BY	Y GC/MS		SW8260B				Analyst: seb
1,1,1,2-Tetracl	hloroethane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:45:00 PM
1,1,1-Trichloro	pethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,1,2,2-Tetracl	hloroethane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:45:00 PM
1,1,2-Trichloro	pethane	ND	10.0	HT	µg/Kg	1	12/1/2004 9:45:00 PM
1,1-Dichloroeth	hane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,1-Dichloroeth	hene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,1-Dichloropre	opene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2,3-Trichloro	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2,3-Trichloro	propane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2,4-Trichloro	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2,4-Trimethy	lbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2-Dibromo-3	-chloropropane	ND	10.0	нт	μg/Kg	1	12/1/2004 9:45:00 PM
1,2-Dibromoeth	hane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2-Dichlorobe	enzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2-Dichloroeth	hane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,2-Dichloropro	opane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,3,5-Trimethy	lbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,3-Dichlorobe	enzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,3-Dichloropro	opane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
1,4-Dichlorobe	enzene	ND	10.0	нт	μg/Kg	1	12/1/2004 9:45:00 PM
2,2-Dichloropro	opane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
2-Butanone		ND	40.0	нт	μg/Kg	1	12/1/2004 9:45:00 PM
2-Chlorotoluen	e	ND	10.0	нт	μg/Kg	1	12/1/2004 9:45:00 PM
2-Hexanone		ND	20.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
4-Chlorotoluen	e	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
4-Isopropyltolu	iene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
4-Methyl-2-per	ntanone	ND	40.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Acetone		ND	100	нт	μg/Kg	1	12/1/2004 9:45:00 PM
Benzene		ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Bromobenzene	9	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Bromochlorome		ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Bromodichloror	methane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Bromoform		ND	10.0	нт	μg/Kg	1	12/1/2004 9:45:00 PM
Bromomethane	9	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Carbon disulfid		ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Carbon tetrach		ND	10.0	НТ	μg/Kg	1	12/1/2004 9:45:00 PM
Chlorobenzene		ND	10.0	НТ	μg/Kg	1	12/1/2004 9:45:00 PM
Chloroethane		ND	10.0	НТ	μg/Kg	1	12/1/2004 9:45:00 PM

CLIENT: Time Oil Co.					Lab Order:	0410156
Project: NW Terminal Addition	nal Well Ins	tall Phase III				
VOLATILES BY GC/MS		SW8260B				Analyst: <b>sel</b>
Chloroform	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Chloromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
cis-1,2-Dichloroethene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
cis-1,3-Dichloropropene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Dibromochloromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Dibromomethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Dichlorodifluoromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Ethylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Hexachlorobutadiene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Isopropylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
m,p-Xylene	ND	20.0	нт	μg/Kg	1	12/1/2004 9:45:00 PM
Methyl tert-butyl ether	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Methylene chloride	66.1	50.0	P,HT	μg/Kg	1	12/1/2004 9:45:00 PM
n-Butylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
n-Propylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Naphthalene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
o-Xylene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
sec-Butylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Styrene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
tert-Butylbenzene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Tetrachloroethene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Toluene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
trans-1,2-Dichloroethene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
trans-1,3-Dichloropropene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Trichloroethene	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Trichlorofluoromethane	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Vinyl chloride	ND	10.0	HT	μg/Kg	1	12/1/2004 9:45:00 PM
Surr: 1,2-Dichloroethane-d4	75.4	71.5-112	HT	%REC	1	12/1/2004 9:45:00 PM
Surr: 4-Bromofluorobenzene	89.6	75.7-122	HT	%REC	1	12/1/2004 9:45:00 PM
Surr: Dibromofluoromethane	72.9	64.3-124	HT	%REC	1	12/1/2004 9:45:00 PM
Surr: Toluene-d8	75.6	74.9-120	HT	%REC	1	12/1/2004 9:45:00 PM
Lab ID: 0410156-12			(	Collection Date	: 10/28/200	)4 2:45:00 PM
Client Sample ID: LW043S (5-5.5)				Matrix	: SOIL	
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST Hold	HOLD	PER CLIENT			1	Analyst: <b>ADN</b> 11/4/2004

**Date:** 06-Dec-04

**CLIENT:** 

Time Oil Co.

Lab Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0410156-13

**Collection Date:** 10/28/2004 3:05:00 PM

Client Sample ID: LW043S (13-14)				Matri	x: SOIL	
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	15100	88.0		mg/Kg-dry	5	11/10/2004
Lube Oil	ND	293	А3	mg/Kg-dry	5	11/10/2004
Surr: o-Terphenyl	495	50-150	S,MI	%REC	5	11/10/2004
NWTPH-GX		NWTPH-GX				Analyst: tlf
Gasoline	2330	29.3		mg/Kg-dry	10	11/1/2004
Surr: 4-Bromofluorobenzene	42.0	50-150	S,D	%REC	10	11/1/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.56		mg/Kg	1	11/8/2004 6:17:07 PM
Chromium	12.9	0.391		mg/Kg	1	11/8/2004 6:17:07 PM
Copper	12.2	0.781		mg/Kg	1	11/6/2004 11:48:54 PM
Lead	ND	1.56		mg/Kg	1	11/6/2004 11:48:54 PM
Nickel	14.4	0.391		mg/Kg	1	11/6/2004 11:48:54 PM
Zinc	47.3	0.781		mg/Kg	1	11/6/2004 11:48:54 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
1,2-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
1,3-Dichlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
1,4-Dichlorobenzene	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
2,4,5-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
2,4,6-Trichlorophenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
2,4-Dichlorophenol	ND	200		μg/Kg	1	11/7/2004 12:42:00 PM
2,4-Dimethylphenol	ND	200		μg/Kg	1	11/7/2004 12:42:00 PM
2,4-Dinitrophenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
2,4-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
2,6-Dinitrotoluene	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
2-Chloronaphthalene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
2-Chlorophenol	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
2-Methylnaphthalene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
2-Methylphenol	ND	133		μg/Kg	1	11/7/2004 12:42:00 PM
2-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
2-Nitrophenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
3,3-Dichlorobenzidine	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
3-&4-Methylphenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
3-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
4,6-Dinitro-2-methylphenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
4-Bromophenyl phenyl ether	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
4-Chloro-3-methylphenol	ND	133		μg/Kg	1	11/7/2004 12:42:00 PM
4-Chloroaniline	ND	200		μg/Kg	1	11/7/2004 12:42:00 PM

CLIENT: Time Oil Co.					Lab Order:	0410156
Project: NW Terminal Additiona	l Well Inst	ıll Phase III				
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
4-Chlorophenyl phenyl ether	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
4-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
4-Nitrophenol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
Acenaphthene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Acenaphthylene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Anthracene	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Benz(a)anthracene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Benzo(a)pyrene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Benzo(b)fluoranthene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Benzo(g,h,i)perylene	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Benzo(k)fluoranthene	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Benzoic Acid	ND	667		µg/Kg	1	11/7/2004 12:42:00 PM
Benzyl Alcohol	ND	333		μg/Kg	1	11/7/2004 12:42:00 PM
Bis(2-chloroethoxy)methane	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Bis(2-chloroethyl)ether	ND	133		μg/Kg	1	11/7/2004 12:42:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	i	μg/Kg	1	11/7/2004 12:42:00 PM
Butyl benzyl phthalate	ND	66.7		μg/Kg	1	11/7/2004 12:42:00 PM
Carbazole	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Chrysene	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Di-n-butyl phthalate	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Di-n-octyl phthalate	ND	66.7		µg/Kg	1	11/7/2004 12:42:00 PM
Dibenz(a,h)anthracene	ND	66.7	ì	µg/Kg	1	11/7/2004 12:42:00 PM
Dibenzofuran	ND	66.7	ı	µg/Kg	1	11/7/2004 12:42:00 PM
Diethyl phthalate	ND	66.7	ŀ	µg/Kg	1	11/7/2004 12:42:00 PM
Dimethyl phthalate	ND	66.7	ļ	µg/Kg	1	11/7/2004 12:42:00 PM
Fluoranthene	ND	66.7	ļ	ug/Kg	1	11/7/2004 12:42:00 PM
Fluorene	ND	66.7	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
Hexachlorobenzene	ND	66.7	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
Hexachlorobutadiene	ND	133	ļ	ug/Kg	1	11/7/2004 12:42:00 PM
Hexachlorocyclopentadiene	ND	333	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
Hexachloroethane	ND	133	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
Indeno(1,2,3-cd)pyrene	ND	66.7	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
Isophorone	ND	66.7	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
N-Nitrosodi-n-propylamine	ND	133	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
N-Nitrosodimethylamine	ND	66.7	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
N-Nitrosodiphenylamine	ND	66.7	ŀ	ug/Kg	1	11/7/2004 12:42:00 PM
Naphthalene	ND	66.7	1	ug/Kg	1	11/7/2004 12:42:00 PM
Nitrobenzene	ND	66.7		ug/Kg	1	11/7/2004 12:42:00 PM
Pentachlorophenol	ND	333		ug/Kg	1	11/7/2004 12:42:00 PM
Phenanthrene	9050	334		ıg/Kg	5	11/8/2004 7:24:00 PM
Phenol	ND	133	,	ıg/Kg	1	11/7/2004 12:42:00 PM
Pyrene	ND	66.7		ıg/Kg	1	11/7/2004 12:42:00 PM
Surr: 2,4,6-Tribromophenol	47.2	57.8-119		%REC	1	11/7/2004 12:42:00 PM

CLIENT:	Time Oil Co. NW Terminal Additiona	l Wall Inst	tall Dhaga III			Lab Order:	0410156
Project:	NW Terminal Additiona	i wen ms	an rhase m				
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Surr: 2-Fluo	robiphenyl	32.5	52.6-93.2	S	%REC	1	11/7/2004 12:42:00 PM
Surr: 2-Fluo	rophenol	75.2	40.7-111		%REC	1	11/7/2004 12:42:00 PM
Surr: 4-Terp	henyl-d14	96.3	49.8-118		%REC	1	11/7/2004 12:42:00 PM
Surr: Nitrobe	enzene-d5	132	44.8-103	S	%REC	1	11/7/2004 12:42:00 PM
Surr: Phenol	I-d6	71.8	47.5-117		%REC	1	11/7/2004 12:42:00 PM
VOLATILES BY	GC/MS		SW8260B				Analyst: seb
1,1,1,2-Tetrach	loroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,1,1-Trichloroe	ethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,1,2,2-Tetrach	loroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,1,2-Trichloroe	ethane	ND	10.0	HT	µg/Kg	1	12/2/2004 2:52:00 AM
1,1-Dichloroeth	ane	ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
1,1-Dichloroeth	ene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,1-Dichloropro	ppene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2,3-Trichlorob	penzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2,3-Trichlorop	oropane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2,4-Trichlorob	penzene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:52:00 AM
1,2,4-Trimethyll	benzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2-Dibromo-3-	chloropropane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2-Dibromoeth	ane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2-Dichlorober	nzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2-Dichloroeth	ane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,2-Dichloropro	pane	ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
1,3,5-Trimethyll	benzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,3-Dichlorober	nzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,3-Dichloropro	pane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
1,4-Dichlorober	nzene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
2,2-Dichloropro	pane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
2-Butanone		ND	40.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
2-Chlorotoluene	9	ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
2-Hexanone		942	200	нт	μg/Kg	10	12/2/2004 1:10:00 AM
4-Chlorotoluene	9	ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
4-Isopropyltolue	ene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
4-Methyl-2-pent	tanone	ND	40.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
Acetone		ND	100	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Benzene		ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
Bromobenzene		ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
Bromochlorome	ethane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Bromodichlorom		ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
Bromoform		ND	10.0	HT	µg/Kg	1	12/2/2004 2:52:00 AM
Bromomethane		ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
Carbon disulfide	9	ND	10.0	нт	μg/Kg	1	12/2/2004 2:52:00 AM
Carbon tetrachi		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Chlorobenzene	=	ND	10.0	HΤ	μg/Kg	1	12/2/2004 2:52:00 AM
Chloroethane		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM

	ime Oil Co.					Lab Order:	0410156
Project: N	W Terminal Add	itional Well Insta	ll Phase III				
VOLATILES BY GC/	MS		SW8260B				Analyst: seb
Chloroform		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Chloromethane		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
cis-1,2-Dichloroether	пе	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
cis-1,3-Dichloroprope	ene	ND	10.0	HT	µg/Kg	1	12/2/2004 2:52:00 AM
Dibromochlorometha	ne	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Dibromomethane		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Dichlorodifluorometha	ane	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Ethylbenzene		22.4	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Hexachlorobutadiene	•	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Isopropylbenzene		2050	100	HT	μg/Kg	10	12/2/2004 1:10:00 AM
m,p-Xylene		35.7	20.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Methyl tert-butyl ethe	r	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Methylene chloride		65.0	50.0	P,HT	μg/Kg	1	12/2/2004 2:52:00 AM
n-Butylbenzene		5460	1000	HT	μg/Kg	100	12/1/2004 11:27:00 PM
n-Propylbenzene		10900	1000	HT	μg/Kg	100	12/1/2004 11:27:00 PM
Naphthalene		32.2	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
o-Xylene		32.2	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
sec-Butylbenzene		2100	100	HT	μg/Kg	10	12/2/2004 1:10:00 AM
Styrene		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
tert-Butylbenzene		51.2	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Tetrachloroethene		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Toluene		23.8	10.0	HT	µg/Kg	1	12/2/2004 2:52:00 AM
trans-1,2-Dichloroeth	ene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
trans-1,3-Dichloropro	pene	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Trichloroethene		ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Trichlorofluoromethan	ne	ND	10.0	HT	μg/Kg	1	12/2/2004 2:52:00 AM
Vinyl chloride		ND	10.0	HT	µg/Kg	1	12/2/2004 2:52:00 AM
Surr: 1,2-Dichloroe	ethane-d4	75.9	71.5-112	HT	%REC	1	12/2/2004 2:52:00 AM
Surr: 4-Bromofluor	obenzene	305	75.7-122	S,MI	%REC	1	12/2/2004 2:52:00 AM
Surr: Dibromofluor	omethane	72.4	64.3-124	HT	%REC	1	12/2/2004 2:52:00 AM
Surr: Toluene-d8		83.3	74.9-120	HT	%REC	1	12/2/2004 2:52:00 AM

**Date:** 06-Dec-04

**CLIENT:** Time Oil Co. Lab Order: 0410156

NW Terminal Additional Well Install Phase III Project:

**Collection Date:** 10/28/2004 11:30:00 AM Lab ID: 0410156-14

Client Sample ID: LW044S (0-0.5)				Matrix: SOIL						
Analyses	Result	Limit	Qual Un	its	DF	Date Analyzed				
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>				
Diesel	ND	17.0	mg	/Kg-dry	1	11/8/2004				
Lube Oil	ND	56.6	mg	/Kg-dry	1	11/8/2004				
Surr: o-Terphenyl	82.0	50-150	%F	REC	1	11/8/2004				
NWTPH-GX		NWTPH-GX				Analyst: <b>tlf</b>				
Gasoline	48.1	2.83	mg	/Kg-dry	1	11/1/2004				
Surr: 4-Bromofluorobenzene	123	50-150	%F	REC	1	11/1/2004				
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>				
Arsenic	ND	1.72	mg	/Kg	1	11/8/2004 6:22:25 PM				
Chromium	89.7	4.31	mg	/Kg	10	11/9/2004 7:15:23 PM				
Copper	19.7	0.862	mg	/Kg	1	11/6/2004 11:54:15 PM				
Lead	55.6	1.72	mg	/Kg	1	11/6/2004 11:54:15 PM				
Nickel	43.4	4.31	mg	/Kg	10	11/9/2004 7:15:23 PM				
Zinc	158	8.62	mg	/Kg	10	11/9/2004 7:15:23 PM				
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>				
1,2,4-Trichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
1,2-Dichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
1,3-Dichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
1,4-Dichlorobenzene	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,4,5-Trichlorophenol	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,4,6-Trichlorophenol	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,4-Dichlorophenol	ND	200	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,4-Dimethylphenol	ND	200	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,4-Dinitrophenol	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,4-Dinitrotoluene	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
2,6-Dinitrotoluene	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
2-Chloronaphthalene	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
2-Chlorophenol	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
2-Methylnaphthalene	ND	66.7	μg/	Kg	1	11/7/2004 1:13:00 PM				
2-Methylphenol	ND	133	μg/	Kg	1	11/7/2004 1:13:00 PM				
2-Nitroaniline	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
2-Nitrophenol	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
3,3-Dichlorobenzidine	ND	333	μg/	Kg	1	11/7/2004 1:13:00 PM				
3-&4-Methylphenol	ND	333	μg/l		1	11/7/2004 1:13:00 PM				
3-Nitroaniline	ND	333	μg/l		1	11/7/2004 1:13:00 PM				
4,6-Dinitro-2-methylphenol	ND	333	μg/l	≺g	1	11/7/2004 1:13:00 PM				
4-Bromophenyl phenyl ether	ND	66.7	μg/l		1	11/7/2004 1:13:00 PM				
4-Chloro-3-methylphenol	ND	133	μg/l		1	11/7/2004 1:13:00 PM				
4-Chloroaniline	ND	200	μg/l		1	11/7/2004 1:13:00 PM				

CLIENT: Time Oil Co.  Project: NW Terminal Additiona	l Well Insta	ill Phase III		Lab Order:	0410156
SEMIVOLATILE ORGANICS BY GC/MS	····	SW8270D			Analyst: <b>bd</b> a
4-Chlorophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
4-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 1:13:00 PM
4-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 1:13:00 PM
Acenaphthene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Acenaphthylene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Anthracene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Benz(a)anthracene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Benzo(a)pyrene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Benzo(b)fluoranthene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Benzo(g,h,i)perylene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Benzo(k)fluoranthene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Benzoic Acid	ND	667	μg/Kg	1	11/7/2004 1:13:00 PM
Benzyl Alcohol	ND	333	µg/Kg	1	11/7/2004 1:13:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Bis(2-chloroethyl)ether	ND	133	μg/Kg	1	11/7/2004 1:13:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Butyl benzyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Carbazole	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Chrysene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Di-n-butyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Di-n-octyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Dibenz(a,h)anthracene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Dibenzofuran	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Diethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Dimethyl phthalate	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Fluoranthene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Fluorene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Hexachlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Hexachlorobutadiene	ND	133	μg/Kg	1	11/7/2004 1:13:00 PM
Hexachlorocyclopentadiene	ND	333	μg/Kg	1	11/7/2004 1:13:00 PM
Hexachloroethane	ND	133	μg/Kg	1	11/7/2004 1:13:00 PM
Indeno(1,2,3-cd)pyrene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Isophorone	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
N-Nitrosodí-n-propylamine	ND	133	μg/Kg	1	11/7/2004 1:13:00 PM
N-Nitrosodimethylamine	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
N-Nitrosodiphenylamine	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Naphthalene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Nitrobenzene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Pentachlorophenol	ND	333	μg/Kg	1	11/7/2004 1:13:00 PM
Phenanthrene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Phenol	ND	133	μg/Kg	1	11/7/2004 1:13:00 PM
Pyrene	ND	66.7	μg/Kg	1	11/7/2004 1:13:00 PM
Surr: 2,4,6-Tribromophenol	64.0	57.8-119	%REC	1	11/7/2004 1:13:00 PM

CLIENT:	Time Oil Co.					Lab Order:	0410156
Project:	NW Terminal Additiona	l Well Insta	all Phase III				
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D				Analyst: <b>bd</b> a
Surr: 2-Fluo		81.4	52.6-93.2		%REC	1	11/7/2004 1:13:00 PM
Surr: 2-Fluo	• •	61.2	40.7-111		%REC	1	11/7/2004 1:13:00 PM
Surr: 4-Terp	•	74.0	49.8-118		%REC	1	11/7/2004 1:13:00 PM
Surr: Nitrobe	•	58.5	44.8-103		%REC	1	11/7/2004 1:13:00 PM
Surr: Phenol		66.5	47.5-117		%REC	1	11/7/2004 1:13:00 PM
VOLATILES BY	GC/MS		SW8260B				Analyst: <b>seb</b>
1,1,1,2-Tetrach	nloroethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PN
1,1,1-Trichloro	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,1,2,2-Tetrach	nloroethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PN
1,1,2-Trichloroe	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PN
1,1-Dichloroeth		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,1-Dichloroeth	nene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,1-Dichloropro	opene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2,3-Trichlorol	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2,3-Trichloro	propane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2,4-Trichlorol	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2,4-Trimethyll	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2-Dibromo-3-	chloropropane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2-Dibromoeth	iane	ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
1,2-Dichlorober	nzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2-Dichloroeth	ane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,2-Dichloropro	pane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,3,5-Trimethyll		ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
1,3-Dichlorober		ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
1,3-Dichloropro		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
1,4-Dichlorober	•	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
2,2-Dichloropro		ND	10.0	HT	µg/Kg	1	12/1/2004 10:19:00 PM
2-Butanone	•	ND	40.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
2-Chlorotoluene	e	ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
2-Hexanone		ND	20.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
4-Chlorotoluene	e	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
4-Isopropyltolue		ND	10.0	НТ	μg/Kg	1	12/1/2004 10:19:00 PM
4-Methyl-2-pen		ND	40.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Acetone		ND	100	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Benzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Bromobenzene	•	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Bromochlorome		ND	10.0	НТ	µg/Kg	1	12/1/2004 10:19:00 PM
Bromodichlorom		ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
Bromoform	· · · · · · · · · · · · · · ·	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Bromomethane		ND	10.0	НТ	μg/Kg μg/Kg	1	12/1/2004 10:19:00 PM
Carbon disulfide		ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
Carbon tetrachl		ND	10.0	нт	μg/Kg	1	12/1/2004 10:19:00 PM
Chlorobenzene		ND	10.0	HT	μg/Kg μg/Kg	1	12/1/2004 10:19:00 PM
SINGIODENZENE		ND	10.0	HT	μg/Kg μg/Kg	1	12/1/2004 10:19:00 PM

CLIENT: Tin	ne Oil Co.					Lab Order:	0410156
Project: NW	/ Terminal Addition	al Well Insta	ill Phase III				
VOLATILES BY GC/M	S		SW8260B				Analyst: <b>seb</b>
Chloroform		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Chloromethane		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
cis-1,2-Dichloroethene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
cis-1,3-Dichloropropen	е	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Dibromochloromethane		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Dibromomethane		ND	10.0	HT	µg/Kg	1	12/1/2004 10:19:00 PM
Dichlorodifluoromethan	е	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Ethylbenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Hexachlorobutadiene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Isopropylbenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
m,p-Xylene		ND	20.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Methyl tert-butyl ether		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Methylene chloride		67.3	50.0	P,HT	μg/Kg	1	12/1/2004 10:19:00 PM
n-Butylbenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
n-Propylbenzene		ND	10.0	HT	µg/Kg	1	12/1/2004 10:19:00 PM
Naphthalene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
o-Xylene		ND	10.0	HT	µg/Kg	1	12/1/2004 10:19:00 PM
sec-Butylbenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Styrene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
tert-Butylbenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Tetrachloroethene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Toluene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
trans-1,2-Dichloroether	ne	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
trans-1,3-Dichloroprope	ene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Trichloroethene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Trichlorofluoromethane		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Vinyl chloride		ND	10.0	HT	μg/Kg	1	12/1/2004 10:19:00 PM
Surr: 1,2-Dichloroeth	ane-d4	78.9	71.5-112	HT	%REC	1	12/1/2004 10:19:00 PM
Surr: 4-Bromofluorol	penzene	88.3	75.7-122	HT	%REC	1	12/1/2004 10:19:00 PM
Surr: Dibromofluoron	nethane	76.4	64.3-124	HT	%REC	1	12/1/2004 10:19:00 PM
Surr: Toluene-d8		81.2	74.9-120	HT	%REC	1	12/1/2004 10:19:00 PM

Date: 06-Dec-04

CLIENT:

Time Oil Co.

Lab Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0410156-15

**Collection Date:** 10/28/2004 11:35:00 AM

Client Sample ID:

LW044S (1-1.5)

Matrix: SOIL

Client Sample ID: LW044S (1-1.5)			Matr	ix: SOIL	
Analyses	Result	Limit	Qual Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>
Diesel	ND	16.7	mg/Kg-dry	1	11/8/2004
Lube Oil	ND	55.5	mg/Kg-dry	1	11/8/2004
Surr: o-Terphenyl	88.6	50-150	%REC	1	11/8/2004
NWTPH-GX		NWTPH-GX			Analyst: tlf
Gasoline	8.44	2.78	mg/Kg-dry	1	11/1/2004
Surr: 4-Bromofluorobenzene	109	50-150	%REC	1	11/1/2004
TOTAL METALS BY ICP		E6010			Analyst: <b>skc</b>
Arsenic	ND	1.72	mg/Kg	1	11/8/2004 6:27:42 PM
Chromium	14.3	0.431	mg/Kg	1	11/8/2004 6:27:42 PM
Copper	11.8	0.862	mg/Kg	1	11/6/2004 11:59:35 PM
Lead	ND	1.72	mg/Kg	1	11/6/2004 11:59:35 PM
Nickel	15.0	0.431	mg/Kg	1	11/6/2004 11:59:35 PM
Zinc	49.3	0.862	mg/Kg	1	11/6/2004 11:59:35 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/7/2004 1:43:00 PM
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/7/2004 1:43:00 PM
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
2-Chlorophenol	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
2-Methylphenol	ND	133	μg/Kg	1	11/7/2004 1:43:00 PM
2-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
2-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
3-&4-Methylphenol	ND	333	μ <b>g</b> /Kg	1	11/7/2004 1:43:00 PM
3-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/7/2004 1:43:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 1:43:00 PM
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/7/2004 1:43:00 PM
4-Chloroaniline	ND	200	μg/Kg	1	11/7/2004 1:43:00 PM

	ne Oil Co.	1 <b>337</b> - 11 T - 4	u Di III			Lab Order:	0410156
Project: NV	V Terminal Additiona	i well insta	III Phase III		•		
SEMIVOLATILE ORGA			SW8270D				Analyst: <b>bd</b> a
4-Chlorophenyl phenyl	ether	ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
4-Nitroaniline		ND	333		μg/Kg	1	11/7/2004 1:43:00 PM
4-Nitrophenol		ND	333		µg/Kg	1	11/7/2004 1:43:00 PM
Acenaphthene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Acenaphthylene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Anthracene		ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
Benz(a)anthracene		ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
Benzo(a)pyrene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Benzo(b)fluoranthene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Benzo(g,h,i)perylene		ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
Benzo(k)fluoranthene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Benzoic Acid		ND	667		μg/Kg	1	11/7/2004 1:43:00 PM
Benzyl Alcohol		ND	333		μg/Kg	1	11/7/2004 1:43:00 PM
Bis(2-chloroethoxy)me	thane	ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
Bis(2-chloroethyl)ether		ND	133		μg/Kg	1	11/7/2004 1:43:00 PM
Bis(2-chloroisopropyl)e	ether	ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Bis(2-ethylhexyl)phtha	ate	ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Butyl benzyl phthalate		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Carbazole		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Chrysenė		NĎ	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Di-n-butyl phthalate		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Di-n-octyl phthalate		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Dibenz(a,h)anthracene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Dibenzofuran		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Diethyl phthalate		ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
Dimethyl phthalate		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Fluoranthene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Fluorene		ND	66.7		µg/Kg	1	11/7/2004 1:43:00 PM
Hexachlorobenzene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Hexachlorobutadiene		ND	133		μg/Kg	1	11/7/2004 1:43:00 PM
Hexachlorocyclopentac	liene	ND	333		μg/Kg	1	11/7/2004 1:43:00 PM
Hexachloroethane		ND	133		μg/Kg	1	11/7/2004 1:43:00 PM
Indeno(1,2,3-cd)pyrene	2	ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Isophorone	,	ND	66.7		µg/Kg µg/Kg	1	11/7/2004 1:43:00 PM
N-Nitrosodi-n-propylam	ino	ND	133		μg/Kg μg/Kg	1	11/7/2004 1:43:00 PM
N-Nitrosodimethylamine		ND	66.7		μg/Kg μg/Kg	1	11/7/2004 1:43:00 PM
N-Nitrosodimetrylamine N-Nitrosodiphenylamine		ND ND	66.7		μg/Kg μg/Kg	1	11/7/2004 1:43:00 PM
Naphthalene		ND	66.7			1	11/7/2004 1:43:00 PM
Nitrobenzene		ND	66.7		μg/Kg μα/Kg	1	11/7/2004 1:43:00 PM
Pentachlorophenol					μg/Kg		
'		ND	333		µg/Kg	1	11/7/2004 1:43:00 PM
Phenanthrene		ND	66.7		μg/Kg	1	11/7/2004 1:43:00 PM
Phenol		ND	133		μg/Kg	1	11/7/2004 1:43:00 PM
Pyrene	i i	ND 54.0	66.7	_	µg/Kg	1	11/7/2004 1:43:00 PM
Surr: 2,4,6-Tribromo	ohenol	54.2	57.8-119	S	%REC	1	11/7/2004 1:43:00 PM

CLIENT:	Time Oil Co.		11.51			Lab Order:	0410156
Project:	NW Terminal Additional	Well Inst	all Phase III				
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Surr: 2-Fluo	robiphenyl	62.6	52.6-93.2		%REC	1	11/7/2004 1:43:00 PM
Surr: 2-Fluo	rophenol	49.5	40.7-111		%REC	1	11/7/2004 1:43:00 PM
Surr: 4-Terp	henyl-d14	68.0	49.8-118		%REC	1	11/7/2004 1:43:00 PM
Surr: Nitrobe	enzene-d5	48.7	44.8-103		%REC	1	11/7/2004 1:43:00 PM
Surr: Pheno	I-d6	48.8	47.5-117		%REC	1	11/7/2004 1:43:00 PM
VOLATILES BY	GC/MS		SW8260B				Analyst: seb
1,1,1,2-Tetrach	loroethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,1,1-Trichloro	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,1,2,2-Tetrach	loroethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,1,2-Trichloro	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,1-Dichloroeth	ane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,1-Dichloroeth	ene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,1-Dichloropro	ppene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2,3-Trichlorol	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2,3-Trichloro	oropane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2,4-Trichlorol	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2,4-Trimethyl	benzene	ND	10.0	HT	µg/Kg	1	12/1/2004 10:53:00 PM
1,2-Dibromo-3-	chloropropane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2-Dibromoeth	ane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2-Dichlorobe	nzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2-Dichloroeth	ane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,2-Dichloropro	ppane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,3,5-Trimethyli	benzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,3-Dichlorober	nzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,3-Dichloropro	ppane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
1,4-Dichlorober	nzene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
2,2-Dichloropro	pane	ND	10.0	HT	µg/Kg	1	12/1/2004 10:53:00 PM
2-Butanone		ND	40.0	HT	µg/Kg	1	12/1/2004 10:53:00 PM
2-Chlorotoluene	•	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
2-Hexanone		ND	20.0	HT	µg/Kg	1	12/1/2004 10:53:00 PM
4-Chlorotoluene	e	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
4-Isopropyltolue	ene	ND	10.0	HT	µg/Kg	1	12/1/2004 10:53:00 PM
4-Methyl-2-pen	tanone	ND	40.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Acetone		ND	100	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Benzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Bromobenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Bromochlorome	ethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Bromodichloron	nethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Bromoform		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Bromomethane		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Carbon disulfide	е	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Carbon tetrachl	oride	ND	10.0	нт	μg/Kg	1	12/1/2004 10:53:00 PM
Chlorobenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Chloroethane		ND	10.0	нт	μg/Kg	1	12/1/2004 10:53:00 PM

CLIENT:	Time Oil Co.				]	Lab Order:	0410156
Project:	NW Terminal Addition	onal Well Ins	tall Phase III		_		
VOLATILES BY	GC/MS		SW8260B				Analyst: <b>sel</b>
Chloroform		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PI
Chloromethane		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 Pt
cis-1,2-Dichlore	pethene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
cis-1,3-Dichlor	ppropene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Dibromochloror	nethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Dibromomethar	ne	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Dichlorodifluoro	omethane	ND	10.0	HT	µg/Kg	1	12/1/2004 10:53:00 PM
Ethylbenzene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Hexachlorobuta	adiene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Isopropylbenze	ene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
m,p-Xylene		ND	20.0	нт	μg/Kg	1	12/1/2004 10:53:00 PM
Methyl tert-buty	d ether	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Methylene chlo	ride	60.0	50.0	P,HT	μg/Kg	1	12/1/2004 10:53:00 PM
n-Butylbenzene	e	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
n-Propylbenzer	ne	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Naphthalene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
o-Xylene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
sec-Butylbenze	ene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Styrene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
tert-Butylbenze	ne	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Tetrachloroethe	ene	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Toluene		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
trans-1,2-Dichlo	oroethene	ND	10.0	HT	µg/Kg	1	12/1/2004 10:53:00 PN
trans-1,3-Dichlo	oropropene	ND	10.0	HT	µg/Kg	1	12/1/2004 10:53:00 PN
Trichloroethene	)	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
Trichlorofluoron	nethane	ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PN
Vinyl chloride		ND	10.0	HT	μg/Kg	1	12/1/2004 10:53:00 PM
	hloroethane-d4	79.9	71.5-112	HT	%REC	1	12/1/2004 10:53:00 PN
Surr: 4-Brom	ofluorobenzene	91.3	75.7-122	HT	%REC	1	12/1/2004 10:53:00 PM
Surr: Dibrom	ofluoromethane	78.7	64.3-124	HT	%REC	1	12/1/2004 10:53:00 PM
Surr: Toluene	e-d8	76.5	74.9-120	HT	%REC	1	12/1/2004 10:53:00 PM
Lab ID:	0410156-16			,	Collection Date:	: 10/28/200	04 11:50:00 AM
Client Sample I					Matrix:	SOIL	
Analyses		Result	Limit	Qual	Units	DF	Date Analyzed
HOLD PER CLIE	ENT REQUEST	HOLD	PER CLIENT			1	Analyst: <b>ADN</b> 11/4/2004

**Date:** 06-Dec-04

CLIENT: Time Oil Co. Lab Order: 0410156

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0410156-17 **Collection Date:** 10/28/2004 12:10:00 PM

Client Sample ID: LW044S (12.5-13.5) Matrix: SOIL

<b>Client Sample ID:</b> LW044S (12.5-13.5)			Matri	x: SOIL	
Analyses	Result	Limit Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>
Diesel	3500	17.7	mg/Kg-dry	1	11/8/2004
Lube Oil	ND	59.0	mg/Kg-dry	1	11/8/2004
Surr: o-Terphenyl	103	50-150	%REC	1	11/8/2004
NWTPH-GX		NWTPH-GX			Analyst: <b>tlf</b>
Gasoline	10800	148	mg/Kg-dry	50	11/2/2004
Surr: 4-Bromofluorobenzene	92.2	50-150	%REC	50	11/2/2004
TOTAL METALS BY ICP		E6010			Analyst: <b>skc</b>
Arsenic	ND	1.79	mg/Kg	1	11/8/2004 6:32:59 PM
Chromium	12.1	0.446	mg/Kg	1	11/8/2004 6:32:59 PM
Copper	11.8	0.893	mg/Kg	1	11/7/2004 12:04:56 AM
Lead	ND	1.79	mg/Kg	1	11/7/2004 12:04:56 AM
Nickel	12.8	0.446	mg/Kg	1	11/7/2004 12:04:56 AM
Zinc	43.8	0.893	mg/Kg	1	11/7/2004 12:04:56 AM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/7/2004 2:14:00 PM
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/7/2004 2:14:00 PM
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
2-Chlorophenol	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
2-Methylphenol	ND	133	μg/Kg	1	11/7/2004 2:14:00 PM
2-Nitroaniline	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
2-Nitrophenol	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
3-&4-Methylphenol	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
3-Nitroaniline	ND	333	µg/Kg	1	11/7/2004 2:14:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/7/2004 2:14:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/7/2004 2:14:00 PM
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/7/2004 2:14:00 PM
4-Chloroaniline	ND	200	μg/Kg	1	11/7/2004 2:14:00 PM

CLIENT: Time Oil Co.					Lab Order:	0410156
Project: NW Terminal Additiona	l Well Insta	ill Phase III			•	
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bd</b> :
4-Chlorophenyl phenyl ether	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
4-Nitroaniline	ND	333		μg/Kg	1	11/7/2004 2:14:00 PM
4-Nitrophenol	ND	333		μg/Kg	1	11/7/2004 2:14:00 PM
Acenaphthene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Acenaphthylene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Anthracene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Benz(a)anthracene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Benzo(a)pyrene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Benzo(b)fluoranthene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Benzo(g,h,i)perylene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Benzo(k)fluoranthene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Benzoic Acid	ND	667		μg/Kg	1	11/7/2004 2:14:00 PM
Benzyl Alcohol	ND	333		μg/Kg	1	11/7/2004 2:14:00 PM
Bis(2-chloroethoxy)methane	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Bis(2-chloroethyl)ether	ND	133		μg/Kg	1	11/7/2004 2:14:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Bis(2-ethylhexyl)phthalate	159	66.7		µg/Kg	1	11/7/2004 2:14:00 PM
Butyl benzyl phthalate	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Carbazole	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Chrysene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Di-n-butyl phthalate	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Di-n-octyl phthalate	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Dibenz(a,h)anthracene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Dibenzofuran	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Diethyl phthalate	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Dimethyl phthalate	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Fluoranthene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Fluorene	284	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Hexachlorobenzene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Hexachlorobutadiene	ND	133		μg/Kg	1	11/7/2004 2:14:00 PM
Hexachlorocyclopentadiene	ND	333		μg/Kg	1	11/7/2004 2:14:00 PM
Hexachloroethane	ND	133		μg/Kg	1	11/7/2004 2:14:00 PM
Indeno(1,2,3-cd)pyrene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Isophorone	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
N-Nitrosodi-n-propylamine	ND	133		μg/Kg	1	11/7/2004 2:14:00 PM
N-Nitrosodimethylamine	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
N-Nitrosodiphenylamine	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Naphthalene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Nitrobenzene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Pentachlorophenol	ND	333		μg/Kg	1	11/7/2004 2:14:00 PM
Phenanthrene	215	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Phenol	ND	133		μg/Kg	1	11/7/2004 2:14:00 PM
Pyrene	ND	66.7		μg/Kg	1	11/7/2004 2:14:00 PM
Surr: 2,4,6-Tribromophenol	47.5	57.8-119	S	%REC	1	11/7/2004 2:14:00 PM

CLIENT: Time Oil Co.					Lab Order:	0410156
Project: NW Terminal Additiona	l Well Ins	tall Phase III				
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
Surr: 2-Fluorobiphenyl	69.4	52.6-93.2		%REC	1	11/7/2004 2:14:00 PM
Surr: 2-Fluorophenol	86.6	40.7-111		%REC	1	11/7/2004 2:14:00 PM
Surr: 4-Terphenyl-d14	64.7	49.8-118		%REC	1	11/7/2004 2:14:00 PM
Surr: Nitrobenzene-d5	157	44.8-103	S	%REC	1	11/7/2004 2:14:00 PM
Surr: Phenol-d6	54.3	47.5-117		%REC	1	11/7/2004 2:14:00 PM
VOLATILES BY GC/MS		SW8260B				Analyst: seb
1,1,1,2-Tetrachloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,1,1-Trichloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,1,2,2-Tetrachloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,1,2-Trichloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,1-Dichloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,1-Dichloroethene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,1-Dichloropropene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2,3-Trichlorobenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2,3-Trichloropropane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2,4-Trichlorobenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2,4-Trimethylbenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2-Dibromo-3-chloropropane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2-Dibromoethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2-Dichlorobenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2-Dichloroethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,2-Dichloropropane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,3,5-Trimethylbenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
1,3-Dichlorobenzene	ND	10.0	НТ	μg/Kg	1	12/2/2004 3:27:00 AM
1,3-Dichloropropane	ND	10.0	НТ	μg/Kg	1	12/2/2004 3:27:00 AM
1,4-Dichlorobenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
2,2-Dichloropropane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
2-Butanone	ND	40.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
2-Chlorotoluene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
2-Hexanone	ND	20.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
4-Chlorotoluene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
4-Isopropyltoluene	ND	10.0	нт	μg/Kg	1	12/2/2004 3:27:00 AM
4-Methyl-2-pentanone	ND	40.0	нт	μg/Kg	1	12/2/2004 3:27:00 AM
Acetone	ND	100	HT	μg/Kg	1	12/2/2004 3:27:00 AM
Benzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
Bromobenzene	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
Bromochloromethane	ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
Bromodichloromethane	ND	10.0	НТ	μg/Kg	1	12/2/2004 3:27:00 AM
Bromoform	ND	10.0	нт	μg/Kg	1	12/2/2004 3:27:00 AM
Bromomethane	ND	10.0	HT	µg/Kg	1	12/2/2004 3:27:00 AM
Carbon disulfide	ND	10.0	НТ	μg/Kg	1	12/2/2004 3:27:00 AM
Carbon tetrachloride	ND	10.0	нт	μg/Kg	1	12/2/2004 3:27:00 AM
Chlorobenzene	ND	10.0	НТ	μg/Kg	1	12/2/2004 3:27:00 AM
Chloroethane	ND	10.0	HT	μg/Kg μg/Kg	1	12/2/2004 3:27:00 AM

ND ND ND ND ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND ND ND ND ND	\$W8260B  10.0	<u> </u>	pg/Kg pg/Kg pg/Kg	1 1 1 1 1 1 1 1 100 1 1 1 100 100 1	Analyst: seb 12/2/2004 3:27:00 AM
ND ND ND ND ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND ND ND ND ND	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 1 1 1 1 100 1 1 1 100 10	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
ND ND ND ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND ND ND ND	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 1 1 1 1 100 1 1 1 100 10	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
ND ND ND ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0		µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 1 1 1 1 100 1 1 1 100 10	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
ND ND ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0		pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg	1 1 1 1 1 1 100 1 1 1 100 10	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
ND ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 10.0 10.0 10.0 10.0 1000 20.0 10.0 1		pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg	1 1 1 1 100 1 1 1 100 100	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
ND ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 10.0 10.0 10.0 1000 20.0 10.0 50.0 10.0 1000 10.0 10.0 10.0	\ht\$\ht\$\ht\$\ht\$\ht\$\ht\$\ht\$\ht\$\ht\$\ht\$	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 1 100 1 1 1 100 10 1 1	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 10.0 10.0 20.0 10.0 50.0 10.0 1000 10.0 10.0 10.0	± ± ± ± ± ± ± ± ± ± ± ± ± ± ± ±	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 100 1 1 1 100 10 1 1	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
ND ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 10.0 1000 20.0 10.0 50.0 10.0 1000 10.0 10.0 10.0	\{\frac{1}{2} \fra	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 100 1 1 1 1 100 10	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 12:02:00 AM 12/2/2004 12:02:00 AM
ND 3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 1000 20.0 10.0 50.0 10.0 1000 10.0 10.0 10.0	E	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 100 1 1 1 1 100 10 1 1	12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM
3950 31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	1000 20.0 10.0 50.0 10.0 1000 10.0 10.0 10.0 1		µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	100 1 1 1 1 100 10 1 1 1	12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
31.2 ND 62.0 206 5740 390 ND ND 3980 ND 32.9	20.0 10.0 50.0 10.0 1000 10.0 10.0 10.0 1		µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 1 100 1 1 1 100	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
ND 62.0 206 5740 390 ND ND 3980 ND 32.9	10.0 50.0 10.0 1000 10.0 10.0 10.0 10.0		µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 1 100 10 1 1 1	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
62.0 206 5740 390 ND ND 3980 ND 32.9	50.0 10.0 1000 10.0 10.0 10.0 10.0 10.0	P,HT HT HT HT HT HT HT	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 1 100 10 1 1 1	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
206 5740 390 ND ND 3980 ND 32.9	10.0 1000 100 10.0 10.0 1000 10.0	HT HT HT HT HT HT	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	1 100 10 1 1 1 100	12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
5740 390 ND ND 3980 ND 32.9	1000 100 10.0 10.0 1000 10.0	HT HT HT HT HT	µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg µg/Kg	100 10 1 1 1 100	12/2/2004 12:02:00 AM 12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
390 ND ND 3980 ND 32.9	100 10.0 10.0 1000 10.0	HT HT HT HT	pg/Kg pg/Kg pg/Kg pg/Kg pg/Kg	10 1 1 100	12/2/2004 1:44:00 AM 12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
ND ND 3980 ND 32.9	10.0 10.0 1000 10.0	НТ НТ НТ	µg/Kg µg/Kg µg/Kg µg/Kg	1 1 100	12/2/2004 3:27:00 AM 12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
ND 3980 ND 32.9	10.0 1000 10.0	HT HT	µg/Kg µg/Kg µg/Kg	1 100	12/2/2004 3:27:00 AM 12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
3980 ND 32.9	1000 10.0	HT HT	μg/Kg μg/Kg	100	12/2/2004 12:02:00 AM 12/2/2004 3:27:00 AM
ND 32.9	10.0	HT	μg/Kg		12/2/2004 3:27:00 AM
32.9			_	1	
	10.0			4	40/0/0004 0 07 00 414
	40.0		μg/Kg	1	12/2/2004 3:27:00 AM
ND	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
17.9	10.0	HT	μg/Kg	1	12/2/2004 3:27:00 AM
					12/2/2004 3:27:00 AM
					12/2/2004 3:27:00 AM
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in this	ecal	in S As	H 121	115/04	
- CONDING	ND ND ND ND 76.1 409 75.5 81.7	ND 10.0 ND 10.0 ND 10.0 ND 10.0 76.1 71.5-112 409 75.7-122 75.5 64.3-124 81.7 74.9-120	ND 10.0 HT ND 10.0 HT ND 10.0 HT ND 10.0 HT 76.1 71.5-112 HT 409 75.7-122 S,MI 75.5 64.3-124 HT 81.7 74.9-120 HT	ND 10.0 HT μg/Kg ND 10.0 HT μg/Kg ND 10.0 HT μg/Kg ND 10.0 HT μg/Kg ND 10.0 HT μg/Kg 76.1 71.5-112 HT %REC 409 75.7-122 S,MI %REC 75.5 64.3-124 HT %REC 81.7 74.9-120 HT %REC	ND 10.0 HT µg/Kg 1  ND 10.0 HT µg/Kg 1  ND 10.0 HT µg/Kg 1  ND 10.0 HT µg/Kg 1  76.1 71.5-112 HT %REC 1  409 75.7-122 S,MI %REC 1  75.5 64.3-124 HT %REC 1  81.7 74.9-120 HT %REC 1

**Date:** 06-Dec-04

CLIENT:

Project:

Time Oil Co.

Work Order:

0410156

NW Terminal Additional Well Install Phase III

#### **ANALYTICAL QC SUMMARY REPORT**

TestCode: 6010\_S

Sample ID	MBLK	SampType:	MBLK	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Da	te: 11/1/2	:004	RunID: T.	JAIRIS_041	106F
Client ID:	ZZZZZ	Batch ID:	12163	Test	lo: <b>E6010</b>			Analysis Da	ite: 11/6/2	2004	SeqNo: 29	1023	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		,	ND	2.00									
Chromium			ND	0.500									
Copper			ND	1.00									
Lead			ND	2.00									
Nickel			ND	0.500									
Zinc			0.38	1.00									J
Sample ID	LCS	SampType:	LCS	TestCod	le: <b>6010_S</b>	Units: mg/Kg		Prep Dat	te: 11/1/2	004	Run ID: TJ	AIRIS_041	106F
Client ID:	ZZZZZ	Batch ID:	12163	TestN	lo: <b>E6010</b>			Analysis Da	te: <b>11/6/2</b>	004	SeqNo: 29	1024	
Analyte			Result	PQL	SPK value	SPK Ref Vai	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			99.72	2.00	100	0	99.7	85.1	107	0	0		
Chromium			24.72	0.500	25	0	98.9	84	113	0	0		
Copper			49.25	1.00	50	0	98.5	91.3	111	0	0		
Lead			91.67	2.00	100	0	91.7	84.9	109	0	0		
Nickel			24.57	0.500	25	0	98.3	85.5	112	0	0		
Zinc			50.19	1.00	50	0.38	99.6	86.8	112	0	0		
Sample ID	0410153-01BMS	SampType:	MS	TestCoo	e: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: <b>11/1/2</b>	004	Run ID: <b>TJ</b>	AIRIS_0411	106F
Client ID:	ZZZZZ	Batch ID:	12163	TestN	o: <b>E6010</b>			Analysis Da	te: 11/6/20	004	SeqNo: 29	1027	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			85.29	1.72	86.21	0	98.9	86.1	109	0	0		
Lead			129.8	1.72	86.21	74.9	63.7	92.1	104	0	0		S,RP
Sample ID	0410153-01BMS	SampType:	MS	TestCod	e: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: <b>11/1/2</b> 0	004	Run ID: TJ	A IRIS_0411	109C
Client ID:	ZZZZZ	Batch ID:	12163	TestN	o: <b>E6010</b>			Analysis Dat	te: 11/9/20	004	SeqNo: 29	1574	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	Highl imit	RPD Ref Val	%RPD	RPDLimit	Quai

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Work Order:

Time Oil Co.

0410156

Project:

CLIENT:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

10 10						14.77			441410	004	D 10 =	14 1510 044	4000
1 '	0410153-01BMS	SampType:			de: <b>6010_S</b>	Units: mg/Kg			e: <b>11/1/2</b>			IAIRIS_0411	109C
Client ID:	ZZZZZ	Batch ID:	12163	TestN	No: <b>E6010</b>			Analysis Da	te: 11/9/2	004	SeqNo: 29	1574	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium			747.4	21.6	21.55	890.3	-663	75	121	0	0		SMC
Copper			347.4	43.1	43.1	534.3	-434	75.1	126	0	0		S,MC
Nickel			144.4	21.6	21.55	125.4	88.1	89.3	105	0	0		S,MC
Zinc			1117	43.1	43.1	1358	-560	86.2	113	0	0		S,MC
Sample ID	0410153-01BMSD	SampType:	MSD	TestCod	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: <b>11/1/2</b>	004	Run ID: TJ	AIRIS_0411	106F
Client ID:	ZZZZZ	Batch ID:	12163	TestN	lo: <b>E6010</b>			Analysis Da	te: 11/6/2	004	SeqNo: <b>29</b>	1028	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			89.75	1.67	83.33	0	108	86.1	109	85.29	5.09	20	
Lead			146.2	1.67	83.33	74.9	85.6	92.1	104	129.8	11.9	20	S,RP
Sample ID	0410153-01BMSD	SampType:	MSD	TestCoc	ie: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: <b>11/1/2</b> 0	004	Run ID: TJ	AIRIS_0411	109C
Sample ID Client ID:	0410153-01BMSD ZZZZZ	SampType: Batch ID:			de: <b>6010_S</b> do: <b>E6010</b>	Units: mg/Kg		Prep Dat Analysis Dat			RunID: TJ SeqNo: 29	_	109C
· '		, ,,			_	Units: mg/Kg SPK Ref Val	%REC	Analysis Dat	e: <b>11/9/2</b> 0			_	I <b>09C</b> Qual
Client ID:		, ,,	12163	TestN	lo: <b>E6010</b>	•		Analysis Dat	e: <b>11/9/2</b> 0	004	SeqNo: 29	1575	
Client ID: Analyte		, ,,	12163 Result	TestN PQL	lo: <b>E6010</b> SPK value	SPK Ref Val	%REC	Analysis Dat	e: <b>11/9/2</b> 0	RPD Ref Val	SeqNo: <b>29</b> %RPD	1575 RPDLimit	Qual
Client ID: Analyte Chromium		, ,,	12163 Result 826.7	PQL 20.8	lo: <b>E6010</b> SPK value  20.83	SPK Ref Val	%REC -306	Analysis Dal LowLimit 75	e: <b>11/9/2</b> 0 HighLimit 121	004 RPD Ref Val 747.4	SeqNo: <b>29</b> %RPD 10.1	1575 RPDLimit	Qual S,MC
Client ID: Analyte Chromium Copper		, ,,	12163 Result 826.7 447.1	PQL 20.8 41.7	SPK value 20.83 41.67	SPK Ref Val 890.3 534.3	%REC -306 -209	Analysis Dal LowLimit 75 75.1	HighLimit 121 126	RPD Ref Val 747.4 347.4	SeqNo: <b>29</b> %RPD 10.1 25.1	1575 RPDLimit 20 20	Qual S,MC SR,MC S,MC
Client ID: Analyte Chromium Copper Nickel Zinc		, ,,	Result  826.7 447.1 152.1 1435	PQL 20.8 41.7 20.8 41.7	20.83 41.67 20.83	SPK Ref Val 890.3 534.3 125.4	%REC -306 -209 128	Analysis Dat LowLimit 75 75.1 89.3	HighLimit 121 126 105 113	747.4 347.4 144.4 1117	SeqNo: <b>29</b> %RPD 10.1 25.1 5.19 24.9	1575 RPDLimit 20 20 20 20	Qual S,MC SR,MC S,MC SR,MC
Client ID: Analyte Chromium Copper Nickel Zinc Sample ID	ZZZZZ	Batch ID:	12163  Result  826.7  447.1  152.1  1435  DUP	TestN PQL 20.8 41.7 20.8 41.7 TestCod	20.83 41.67 20.83 41.67	SPK Ref Val 890.3 534.3 125.4 1358	%REC -306 -209 128 184	Analysis Dat  LowLimit  75  75.1  89.3  86.2	HighLimit  121 126 105 113	747.4 347.4 144.4 1117	SeqNo: <b>29</b> %RPD 10.1 25.1 5.19 24.9	1575  RPDLimit  20 20 20 20 20 AIRIS_0411	Qual S,MC SR,MC S,MC SR,MC
Client ID: Analyte Chromium Copper Nickel Zinc Sample ID	0410153-01BDUP	Batch ID:  SampType:	12163  Result  826.7  447.1  152.1  1435  DUP	TestN PQL 20.8 41.7 20.8 41.7 TestCod	lo: <b>E6010</b> SPK value  20.83 41.67 20.83 41.67  de: <b>6010_S</b> lo: <b>E6010</b>	SPK Ref Val 890.3 534.3 125.4 1358	%REC -306 -209 128 184	Analysis Dat  LowLimit  75 75.1 89.3 86.2  Prep Date  Analysis Date	HighLimit  121 126 105 113  11/1/20	747.4 347.4 144.4 1117	SeqNo: 29 %RPD 10.1 25.1 5.19 24.9 Run ID: TJ	1575  RPDLimit  20 20 20 20 20 AIRIS_0411	Qual S,MC SR,MC S,MC SR,MC
Client ID: Analyte Chromium Copper Nickel Zinc Sample ID Client ID:	0410153-01BDUP	Batch ID:  SampType:	12163  Result  826.7  447.1  152.1  1435  DUP  12163	TestN PQL 20.8 41.7 20.8 41.7 TestCod TestN	lo: <b>E6010</b> SPK value  20.83 41.67 20.83 41.67  de: <b>6010_S</b> lo: <b>E6010</b>	SPK Ref Val 890.3 534.3 125.4 1358 Units: mg/Kg	%REC -306 -209 128 184	Analysis Dat  LowLimit  75 75.1 89.3 86.2  Prep Date  Analysis Date	HighLimit  121 126 105 113  11/1/20	747.4 347.4 144.4 1117	SeqNo: 29  %RPD  10.1 25.1 5.19 24.9  RunID: TJ SeqNo: 29	1575  RPDLimit  20 20 20 20 AIRIS_0411  1026	Qual S,MC SR,MC S,MC SR,MC

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

BZTO104(e)023703

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID	0410153-01BDUP	SampType:	DUP	TestCoo	le: <b>6010 S</b>	Units: mg/Kg		Prep Dat	e: <b>11/1/2</b> 0	004	Run ID: TJ	AIRIS_0411	109C
Client ID:	ZZZZZ	Batch ID:		TestN	lo: <b>E6010</b>	0 0		Analysis Dat	te: <b>11/9/2</b> 0	004	SeqNo: 29		
A 1- 4-			D14	DOI	ODK	ODK D-4) (-1	0/ DEC	11	I Itala I taati	DDD D-{\/-\	0/1000	RPDLimit	Qual
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LOWLIMIT	HighLimit	RPD Ref Val	%RPD		Quar
Chromium			1005	21.6	0	0	0	0	0	890.3	12.1	20	
Copper			585.8	43.1	0	0	0	0	0	534.3	9.20	20	
Nickel			143.1	21.6	0	0	0	0	0	125.4	13.2	20	
Zinc	-0		1531	43.1	0	0	0	0	0	1358	12.0	20	
Sample ID	CCV	SampType:	CCV	TestCod	e: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: <b>11/1/2</b> 0	004	Run ID: TJ	AIRIS_0411	06F
Client ID:	ZZZZZ	Batch ID:	12163	TestN	o: <b>E6010</b>			Analysis Dat	e: <b>11/6/2</b> 0	004	SeqNo: 29	1032	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			104.6	2.00	100	0	105	90	110	0	0		
Chromium			25.86	0.500	25	0	103	90	110	0	0		
Copper			49.87	1.00	50	0	99.7	90	110	0	0		
Lead			98.05	2.00	100	0	98	90	110	0	0		
Nickel			25.75	0.500	25	0	103	90	110	0	0		
Zinc			50.83	1.00	50	0	102	90	110	0	0		
Sample ID	CCV	SampType:	ccv	TestCod	e: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: 11/1/20	004	Run ID: TJ	AIRIS_0411	06F
Client ID:	ZZZZZ	Batch ID:	12163	TestN	o: <b>E6010</b>			Analysis Dat	e: <b>11/6/20</b>	004	SeqNo: 29	1043	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			104.5	2.00	100	0	104	90	110	0	0		
Chromium			26.05	0.500	25	0	104	90	110	0	0		
Copper			50.65	1.00	50	0	101	90	110	0	0		
Lead			99.35	2.00	100	0	99.4	90	110	0	0		
Nickel			25.83	0.500	25	0	103	90	110	0	0		
Zinc			51.07	1.00	50	. 0	102	90	110	0	0		
Sample ID	CCV	SampType:	CCV	TestCode	e: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: 11/1/20	04	Run ID: TJ	AIRIS_0411	06F
Client ID:	ZZZZZ	Batch ID:	12163	TestNo	o: <b>E6010</b>			Analysis Date	e: <b>11/7/20</b>	04	SeqNo: 29	1051	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

BZTO104(e)023704

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID	CCV	SampType:	ccv	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: 11/1/2	004	Run ID: TJ	JAIRIS_041	106F
Client ID:	ZZZZZ	Batch ID:	12163	Testl	No: <b>E6010</b>			Analysis Da	te: <b>11/7/2</b> 0	004	SeqNo: 29	1051	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper			52.91	1.00	50	0	106	90	110	0	0		
Lead			104.6	2.00	100	0	105	90	110	0	0		
Nickel			27.34	0.500	25	0	109	90	110	0	0		
Zinc			53.29	1.00	50	0	107	90	110	0	0		
Sample ID	ccv	SampType:	CCV	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: 11/1/20	004	Run ID: TJ	AIRIS_041	109C
Client ID:	ZZZZZ	Batch ID:	12163	Testi	No: <b>E6010</b>			Analysis Da	te: 11/9/20	004	SeqNo: 29	1581	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium			24.23	0.500	25	0	96.9	90	110	0	0		
Copper			51.33	1.00	50	0	103	90	110	0	0		
Nickel			25.99	0.500	25	0	104	90	110	0	0		
Zinc			51.99	1.00	50	0	104	90	110	0	0		
Sample ID	ccv	SampType:	ccv	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: <b>11/1/2</b> 0	004	Run ID: TJ	AIRIS_0411	09C
Client ID:	ZZZZZ	Batch ID:	12163	Test <b>!</b>	No: <b>E6010</b>			Analysis Dat	e: <b>11/9/2</b> 0	004	SeqNo: 29	1584	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HiahLimit	RPD Ref Val	%RPD	RPDLimit	Qual
				,-			701 CO				70110	THE COLUMN	
Chromium			25.19	0.500	25	0	101	90	110	0	0	THE DESTRICT	
Chromium Copper			25.19 51.34			0			<del></del>	0		THE DELIVERY	
				0.500	25		101	90	110		0	THE DESIGNATION OF THE PERSON	
Copper			51.34	0.500 1.00	25 50	0	101 103	90	110 110	0	0		
Copper Nickel	ІСВ	SampType:	51.34 26.28 52.55	0.500 1.00 0.500 1.00	25 50 25	0	101 103 105	90 90 90 90	110 110 110	0 0 0	0 0 0		09C
Copper Nickel Zinc	ICB ZZZZZ	SampType: Batch ID:	51.34 26.28 52.55	0.500 1.00 0.500 1.00	25 50 25 50	0 0 0	101 103 105 105	90 90 90 90	110 110 110 110 110	0 0 0	0 0 0 0	 AIRIS_0411	09C
Copper Nickel Zinc			51.34 26.28 52.55	0.500 1.00 0.500 1.00	25 50 25 50 de: <b>6010_S</b> No: <b>E6010</b>	0 0 0	101 103 105 105	90 90 90 90 Prep Date Analysis Dat	110 110 110 110 2: 11/1/20 e: 11/9/20	0 0 0	0 0 0 0 0	 AIRIS_0411	09C Qual
Copper Nickel Zinc Sample ID Client ID:			51.34 26.28 52.55 ICB 12163	0.500 1.00 0.500 1.00 TestCoo	25 50 25 50 de: <b>6010_S</b> No: <b>E6010</b>	0 0 0 Units: <b>mg/Kg</b>	101 103 105 105	90 90 90 90 Prep Date Analysis Dat	110 110 110 110 2: 11/1/20 e: 11/9/20	0 0 0	0 0 0 0 0 Run ID: TJ SeqNo: 29	AIRIS_0411 1571	
Copper Nickel Zinc Sample ID Client ID: Analyte Chromium			51.34 26.28 52.55 ICB 12163 Result	0.500 1.00 0.500 1.00 TestCoc TestN	25 50 25 50 de: <b>6010_S</b> No: <b>E6010</b> SPK value	0 0 0 Units: mg/Kg	101 103 105 105	90 90 90 90 Prep Date Analysis Dat	110 110 110 110 2: 11/1/20 e: 11/9/20	0 0 0 0 004 RPD Ref Val	0 0 0 0 Run ID: <b>TJ</b> SeqNo: <b>29</b> %RPD	AIRIS_0411 1571	
Copper Nickel Zinc Sample ID Client ID: Analyte			51.34 26.28 52.55 ICB 12163 Result	0.500 1.00 0.500 1.00 TestCoc TestN PQL 0.500	25 50 25 50 de: <b>6010_S</b> No: <b>E6010</b> SPK value	Units: mg/Kg  SPK Ref Val  0	101 103 105 105 %REC	90 90 90 90 Prep Date Analysis Dat LowLimit	110 110 110 110 2: 11/1/20 e: 11/9/20 HighLimit	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 Run ID: TJ SeqNo: 29 %RPD	AIRIS_0411 1571	

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID ICV	SampType: ICV	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Da	te: <b>11/1/2</b>	004	Run ID: TJ	AIRIS_0411	106F
Client ID: ZZZZZ	Batch ID: 12163	Test	lo: <b>E6010</b>			Analysis Da	te: 11/6/2	004	SeqNo: 29	1020	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	98.25	2.00	100	0	98.2	90	110	0	0		
Chromium	24.18	0.500	25	0	96.7	90	110	0	0		
Copper	50.13	1.00	50	0	100	90	110	0	0		
Lead	92.15	2.00	100	0	92.2	90	110	0	0		
Nickel	23.91	0.500	25	0	95.6	90	110	0	0		
Zinc	48.51	1.00	50	0	97	90	110	0	0		

 Sample ID Client ID:	ICV ZZZZZ	SampType: Batch ID:	ICV 12163	TestCode TestNo	: 6010_S : E6010	Units: mg/Kg		Prep Dat Analysis Da	te: 11/1/20 te: 11/9/20		RunID: TJ SeqNo: 29	AIRIS_041′ 1570	1 <b>09C</b>
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium			24.25	0.500	25	0	97	90	110	0	0		
Copper			51.7	1.00	50	0	103	90	110	0	0		
Nickel			25.45	0.500	25	0	102	90	110	0	0		
Zinc			51.59	1.00	50	0	103	90	110	0	0		

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S

Sample ID MBLK	SampType: MBLK	TestCode: 8260_	Units: μg/Kg		Prep Da	te:		Run (D: 59	73J_041201	С
Client ID: ZZZZZ	Batch ID: 12342	TestNo: SW82	60B		Analysis Da	ate: <b>12/1/2</b>	004	SeqNo: 29	5985	
Analyte	Result	PQL SPK val	ue SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	10.0					-			
1,1,1-Trichloroethane	ND	10.0								
1,1,2,2-Tetrachloroethane	ND	10.0								
1,1,2-Trichloroethane	ND	10.0								
1,1-Dichloroethane	ND	10.0								
1,1-Dichloroethene	ND	10.0								
1,1-Dichloropropene	ND	10.0								
1,2,3-Trichlorobenzene	ND	10.0								
1,2,3-Trichloropropane	ND	10.0								
1,2,4-Trichlorobenzene	ND	10.0								
1,2,4-Trimethylbenzene	ND	10.0								
1,2-Dibromo-3-chloropropane	ND	10.0								
1,2-Dibromoethane	ND	10.0								
1,2-Dichlorobenzene	ND	10.0								
1,2-Dichloroethane	ND	10.0								
1,2-Dichloropropane	ND	10.0								
1,3,5-Trimethylbenzene	, ND	10.0								
1,3-Dichlorobenzene	ND	10.0								
1,3-Dichloropropane	ND	10.0								
1,4-Dichlorobenzene	ND	10.0								
2,2-Dichloropropane	ND	10.0								
2-Butanone	ND	40.0								
2-Chlorotoluene	ND	10.0								
2-Hexanone	ND	20.0								
4-Chlorotoluene	ND	10.0								
4-Isopropyltoluene	ND	10.0								
4-Methyl-2-pentanone	ND	40.0								
Acetone	ND	100								
Benzene	ND	10.0								
Bromobenzene	ND	10.0								
Bromochloromethane	ND	10.0								

Oualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

CLIENT:

Project:

Time Oil Co.

Work Order:

0410156

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S

Sample ID MBLK	SampType: MBLK	TestCod	e: <b>8260_S</b>	Units: µg/Kg		Prep Da	te:		Run ID: 59	73J_041201	С
Client ID: ZZZZZ	Batch ID: 12342	TestN	o: <b>SW8260B</b>			Analysis Da	ite: 12/1/2	004	SeqNo: <b>29</b>	5985	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	10.0									
Bromoform	ND	10.0									
Bromomethane	ND	10.0									
Carbondisulfide	ND	10.0									
Carbontetrachloride	ND	10.0									
Chlorobenzene	ND	10.0									
Chloroethane	ND	10.0									
Chloroform	ND	10.0									
Chloromethane	ND	10.0									
cis-1,2-Dichloroethene	ND	10.0									
cis-1,3-Dichloropropene	ND	10.0									
Dibromochloromethane	ND	10.0									
Dibromomethane	ND	10.0									
Dichlorodifluoromethane	ND	10.0									
Ethylbenzene	ND	10.0									
Hexachlorobutadiene	ND	10.0									
Isopropylbenzene	ND	10.0									
m,p-Xylene	ND	20.0									
Methyl tert-butyl ether	ND	10.0									
Methylene chloride	ND	50.0									
n-Butylbenzene	ND	10.0									
n-Propylbenzene	ND	10.0									
Naphthalene	ND	10.0									
o-Xylene	ND	10.0									
sec-Butylbenzene	ND	10.0									
Styrene	ND	10.0									
tert-Butylbenzene	ND	10.0									
Tetrachloroethene	ND	10.0									
Toluene	ND	10.0									
trans-1,2-Dichloroethene	ND	10.0									
trans-1,3-Dichloropropene	ND	10.0									

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

WorkOrder:

0410156

**Project:** 

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S

Sample ID	MBLK	SampType:	MBLK	TestCod	e: <b>8260_S</b>	Units: µg/Kg		Prep Da	te:		Run ID: 59	73J_041201	С
Client ID:	ZZZZZ	Batch ID:	12342	TestN	o: <b>SW8260</b> B	<b>,</b>		Analysis Da	ate: 12/1/2	004	SeqNo: 29	5985	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroeth	nene		ND	10.0									
Trichloroflu	oromethane		ND	10.0									
Vinyl chlori	de		ND	10.0									
Surr:1,2-	-Dichloroethane-d4		99.87	0	100	0	99.9	71.5	112	0	0		
Surr:4-B	romofluorobenzene		97.85	0	100	0	97.8	75.7	122	0	0		
Surr:Dib	romofluoromethane		102.3	0	100	0	102	64.3	124	0	0		
Surr:Toli	uene-d8		75.67	0	100	0	75.7	74.9	120	0	0		
Sample ID	LCS	SampType:	LCS	TestCod	e: <b>8260_S</b>	Units: µg/Kg		Prep Dat	te:		Run ID: 59	73J_041201	С
Client ID:	ZZZZZ	Batch ID:	12342	TestN	o: <b>SW8260B</b>			Analysis Da	te: <b>12/1/2</b>	004	SeqNo: 29	5984	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloro	pethene		67.69	10.0	80	0	84.6	65.4	133	0	0		
Benzene			66.05	10.0	80	0	82.6	78	123	0	0		
Chlorobenz	ene		65.84	10.0	80	0	82.3	79.5	125	0	0		
Toluene			63.66	10.0	80	0	79.6	77.5	132	0	0		
Trichloroeth	iene		68.58	10.0	80	0	85.7	72.4	124	0	0		
Sample ID	0411136-03BMS	SampType:	MS	TestCode	e: <b>8260_S</b>	Units: µg/Kg		Prep Dat	te:		Run ID: 59	73J_041201	С
Client ID:	ZZZZZ	Batch ID:	12342	TestNo	o: <b>SW8260B</b>			Analysis Da	te: <b>12/1/2</b> 0	004	SeqNo: 29	5987	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichlord	pethene		46.56	10.0	40	0	116	69.2	158	0	0		
Benzene			42.58	10.0	40	0	106	71.7	147	0	0		
Chlorobenze	ene		38.24	10.0	40	1.21	92.6	85.6	148	0	0		
Toluene			39.72	10.0	40	1.25	96.2	75.8	153	0	0		
	ene												

B - Analyte detected in the associated Method Blan

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 8260\_S

Sample ID 0411136-03B Client ID: ZZZZZ	MSD SampType:  Batch ID:			e: <b>8260_S</b> b: <b>SW8260</b> B	Units: µg/Kg		Prep Da Analysis Da		004	Run ID: 59	73J_041201 5988	С
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene		42.18	10.0	40	0	105	69.2	158	46.56	9.87	20	
Benzene		39.93	10.0	40	0	99.8	71.7	147	42.58	6.42	20	
Chlorobenzene		37.18	10.0	40	1.21	89.9	85.6	148	38.24	2.81	20	
Toluene		39.98	10.0	40	1.25	96.8	75.8	153	39.72	0.652	20	
Trichloroethene		43.54	10.0	40	1.24	. 106	77.1	138	46.35	6.25	20	
Sample ID CCV	SampType:	CCV	TestCode	e: 8260_S	Units: µg/Kg		Prep Dat	e:	'	Run ID: 59	73J_041201	С
Client ID: ZZZZZ	Batch ID:	12342	TestNo	: SW8260B	i.		Analysis Da	te: <b>12/1/2</b> 0	004	SeqNo: 29	5983	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene		33.03	10.0	40	0	82.6	80	120	0	0	· · · · · ·	
1,2-Dichloropropane		39.96	10.0	40	0	99.9	80	120	0	0		
Chloroform		41.64	10.0	40	0	104	80	120	0	0		
Ethylbenzene		35.42	10.0	40	0	88.6	80	120	0	0		
Toluene		33.24	10.0	40	0	83.1	80	120	0	0		
Vinyl chloride		45.06	10.0	40	0	113	80	120	0	0		
Sample ID CCV	SampType:	CCV	TestCode	e: 8260_S	Units: µg/Kg		Prep Dat	e:		Run ID: 59	73J_041201	С
Client ID: ZZZZZ	Batch ID:	12342	TestNo	: SW8260B			Analysis Da	te: <b>12/1/2</b> 0	004	SeqNo: 29	6021	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene		32.44	10.0	40	0	81.1	80	120	0	0		
1,2-Dichloropropane		38.14	10.0	40	0	95.4	80	120	0	0		
Chloroform		36.13	10.0	40	0	90.3	80	120	0	0		
Ethylbenzene		34.53	10.0	40	0	86.3	80	120	0	0		
Toluene		36.11	10.0	40	0	90.3	80	120	0	0		
Vinyl chloride		45.96	10.0	40	0	115	80	120	0	0		

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

Work Order: Project:

CLIENT:

Time Oil Co.

0410156

NW Terminal Additional Well Install Phase III

**ANALYTICAL QC SUMMARY REPORT** 

TestCode: 8260\_S

Sample ID CCV	SampType: <b>CCV</b>	TestCod	de: <b>8260_S</b>	Units: µg/Kg		Prep Dat	te:		Run ID: 59	73J_041201	С
Client ID: ZZZZZ	Batch ID: 12342	TestN	lo: <b>SW8260B</b>			Analysis Da	te: <b>12/2/2</b> 0	004	SeqNo: 29	6417	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	35.17	10.0	40	0	87.9	80	120	0	. 0		
1,2-Dichloropropane	34.29	10.0	40	0	85.7	80	120	0	0		
Chloroform	34.44	10.0	40	0	86.1	80	120	0	0		
Ethylbenzene	32.47	10.0	40	0	81.2	80	120	0	0		
Toluene	34.52	10.0	40	0	86.3	80	120	0	0		
Vinyl chloride	39.5	10.0	40	0	98.8	80	120	0	0		

J - Analyte detected below quantitation limits

CLIENT:

Project:

Time Oil Co.

Work Order:

0410156

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

Sample ID MB-12198	SampType: MBLK	TestCode: 8270LL_	S Units: µg/Kg	Prep D	Pate: 11/4/2004	Run ID: 5973G_041107A
Client ID: ZZZZZ	Batch ID: 12198	TestNo: SW8270I		Analysis D	Date: 11/7/2004	SeqNo: 290728
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimi	t HighLimit RPD Ref Val	%RPD RPDLimit Qual
1,2,4-Trichlorobenzene	ND	66.7				
1,2-Dichlorobenzene	ND	66.7				
1,3-Dichlorobenzene	ND	66.7				
1,4-Dichlorobenzene	ND	66.7				
2,4,5-Trichlorophenol	ND	333				
2,4,6-Trichlorophenol	ND	333				
2,4-Dichlorophenol	ND	200				
2,4-Dimethylphenol	ND	200				
2,4-Dinitrophenol	ND	333				
2,4-Dinitrotoluene	ND	333				
2,6-Dinitrotoluene	ND	333				
2-Chloronaphthalene	ND	66.7				
2-Chlorophenol	ND	66.7				
2-Methylnaphthalene	7.667	66.7				J
2-Methylphenol	ND	133				
2-Nitroaniline	ND	333				
2-Nitrophenol	ND	333				
3,3-Dichlorobenzidine	ND	333				
3-&4-Methylphenol	ND	333				
3-Nitroaniline	ND	333				
4,6-Dinitro-2-methylphenol	ND	333				
4-Bromophenyl phenyl ether	ND	66.7				
4-Chloro-3-methylphenol	ND	133				
4-Chloroaniline	ND	200				
4-Chlorophenyl phenyl ether	ND	66.7				
4-Nitroaniline	ND	333				
4-Nitrophenol	ND	333				
Acenaphthene	ND	66.7				
Acenaphthylene	ND	66.7				
Anthracene	ND	66.7				
Benz(a)anthracene	ND	66.7				

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Project:

Time Oil Co.

Work Order:

0410156

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

Sample ID MB-12198  Client ID: ZZZZZ	SampType: <b>MBLK</b> Batch ID: <b>12198</b>		ie: <b>8270LL_</b> \$ io: <b>SW8270</b> D				te: 11/4/2			73G_041107	7A
Clientid: ZZZZZ	Batch ID: 12198	restr	10: SVV82/UL	•		Analysis Da	ite: 11///2	:004	SeqNo: 29	0728	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(a)pyrene	ND	66.7									
Benzo(b)fluoranthene	ND	66.7									
Benzo(g,h,i)perylene	ND	66.7									
Benzo(k)fluoranthene	ND	66.7									
Benzoic Acid	ND	667									
BenzylAlcohol	ND	333									
Bis(2-chloroethoxy)methane	ND	66.7									
Bis(2-chloroethyl)ether	ND	133									
Bis(2-chloroisopropyl)ether	ND	66.7									
Bis(2-ethylhexyl)phthalate	ND	66.7									
Butyl benzyl phthalate	ND	66.7									
Carbazole	ND	66.7									
Chrysene	ND	66.7									
Di-n-butyl phthalate	ND	66.7									
Di-n-octylphthalate	ND	66.7									
Dibenz(a,h)anthracene	ND	66.7									
Dibenzofuran	ND	66.7									
Diethylphthalate	ND	66.7									
Dimethyl phthalate	ND	66.7									
Fluoranthene	ND	66.7									
Fluorene	ND	66.7									
Hexachlorobenzene	ND	66.7									
Hexachlorobutadiene	ND	133									
Hexachlorocyclopentadiene	ND	333									
Hexachloroethane	ND	133									
Indeno(1,2,3-cd)pyrene	ND	66.7									
Isophorone	ND	66.7									
N-Nitrosodi-n-propylamine	ND	133									
N-Nitrosodimethylamine	ND	66.7									
N-Nitrosodiphenylamine	ND	66.7									
Naphthalene	ND	66.7									

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID MB-12198	SampType: MBLK	TestCode: 8270LL	_S Units: µg/Kg		Prep Date: 1	1/4/2004	Run ID: 5973G_04110	07A
Client ID: ZZZZZ	Batch ID: 12198	TestNo: SW827	0D		Analysis Date: 1	1/7/2004	SeqNo: <b>290728</b>	
Analyte	Result	PQL SPK valu	e SPK Ref Val	%REC	LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Nitrobenzene	(11)	66.7						J
Pentachlorophenol	ND	333						
Phenanthrene	ND	66.7						
Phenot	ND	133						
Pyrene	ND	66.7						
Surr:2,4,6-Tribromophenol	2862	1.00 333	3 0	85.9	57.8	119 0	0	
Surr: 2-Fluorobiphenyl	3621	1.00 333	3 0	109	52.6	93.2 0	0	S
Surr: 2-Fluorophenol	3019	1.00 333	3 0	90.6	40.7	111 0	0	
Surr: 4-Terphenyl-d14	2919	1.00 333	3 0	87.6	49.8	118 0	0	
Surr: Nitrobenzene-d5	2923	1.00 333	3 0	87.7	44.8	103 0	0	
Surr: Phenol-d6	2951	1.00 333	3 0	88.5	47.5	117 0	0	
Sample ID MB-12368	SampType: MBLK	TestCode: 8270LL	S Units: µg/Kg	-:	Prep Date: 1	2/1/2004	Run ID: 5973G_04120	)1A
Client ID: ZZZZZ	Batch ID: 12368	TestNo: SW8270	סס		Analysis Date: 1	2/1/2004	SeqNo: 296311	
Analyte	Result	PQL SPK value	e SPK Ref Val	%REC	LowLimit Highl	imit RPD Ref Val	%RPD RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	66.7						
1,2-Dichlorobenzene	ND	66.7						
1,3-Dichlorobenzene	ND	66.7						
1,4-Dichlorobenzene	ND	66.7						
2,4,5-Trichlorophenol	ND	333						
2,4,6-Trichlorophenol	ND	333						
2,4-Dichlorophenol	ND	200						
2,4-Dimethylphenol	ND	200						
2,4-Dinitrophenol	ND	333						
2,4-Dinitrotoluene	ND	333						
2,6-Dinitrotoluene	ND	333						
2-Chloronaphthalene	ND	66.7						
2-Chlorophenol	ND	66.7						
2-Methylnaphthalene	ND	66.7						
2-Methylphenol	ND	133						

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID MB-12368	SampType: <b>MBLK</b>	TestCode: 8270LL_S Units: µg/Kg	Prep Date: 12/1/2004	Run ID: 5973G_041201A
Client ID: ZZZZZ	Batch ID: 12368	TestNo: SW8270D	Analysis Date: 12/1/2004	SeqNo: <b>296311</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
2-Nitroaniline	ND	333		
2-Nitrophenol	ND	333		
3,3-Dichlorobenzidine	ND	333		
3-&4-Methylphenol	ND	333		
3-Nitroaniline	ND	333		
4,6-Dinitro-2-methylphenol	ND	333		
4-Bromophenyl phenyl ether	ND	66.7		
4-Chloro-3-methylphenol	ND	133		
4-Chloroaniline	ND	200		
4-Chlorophenyl phenyl ether	ND	66.7		
4-Nitroaniline	ND	333		
4-Nitrophenol	ND	333		
Acenaphthene	ND	66.7		
Acenaphthylene	ND	66.7		
Anthracene	ND	66.7		
Benz(a)anthracene	ND	66.7		
Benzo(a)pyrene	ND	66.7		
Benzo(b)fluoranthene	ND	66.7		
Benzo(g,h,i)perylene	ND	66.7		
Benzo(k)fluoranthene	ND	66.7		
Benzoic Acid	ND	667		
BenzylAlcohol	ND	333		
Bis(2-chloroethoxy)methane	ND	66.7		
Bis(2-chloroethyl)ether	ND	133		
Bis(2-chloroisopropyl)ether	ND	66.7		
Bis(2-ethylhexyl)phthalate	20	66.7		J
Butyl benzyl phthalate	81.33	66.7		-
Carbazole	ND	66.7		
Chrysene	ND	66.7		
Di-n-butyl phthalate	51.33	66.7		J
Di-n-octyl phthalate	ND	66.7		-

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Work Order: Project:

CLIENT:

Time Oil Co.

0410156

NW Terminal Additional Well Install Phase III

**ANALYTICAL QC SUMMARY REPORT** 

Sample ID MB-12368	SampType: MBLK	TestCod	e: <b>8270LL_</b> \$	Units: μg/Kg		Prep Date:	12/1/20	004	Run ID: 59	73G_041201	IA
Client ID: ZZZZZ	Batch ID: 12368	TestN	o: <b>SW8270</b> D			Analysis Date	: 12/1/20	004	SeqNo: 29	6311	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	ND	66.7				.,		•			
Dibenzofuran	ND	66.7									
Diethylphthalate	1091	66.7									
Dimethyl phthalate	ND	66.7									
Fluoranthene	ND	66.7									
Fluorene	ND	66.7									
Hexachlorobenzene	ND	66.7									
Hexachlorobutadiene	ND	133									
Hexachlorocyclopentadiene	ND	333									
Hexachloroethane	ND	133									
Indeno(1,2,3-cd)pyrene	ND	66.7									
Isophorone	ND	66.7									
N-Nitrosodi-n-propylamine	ND	133									
N-Nitrosodimethylamine	ND	66.7									
N-Nitrosodiphenylamine	ND	66.7							ь.		
Naphthalene	ND	66.7									
Nitrobenzene	12.33)	66.7									J
Pentachlorophenol	ND	333									
Phenanthrene	ND	66.7									
Phenol	ND	133									
Pyrene	ND	66.7									
Surr:2,4,6-Tribromophenol	3007	1.00	3333	0	90.2	57.8	119	0	0		
Surr: 2-Fluorobiphenyl	3956	1.00	3333	0	119	52.6	93.2	0	0		S
Surr: 2-Fluorophenol	3491	1.00	3333	0	105	40.7	111	0	0		
Surr:4-Terphenyl-d14	2950	1.00	3333	0	88.5	49.8	118	0	0		
Surr: Nitrobenzene-d5	3552	1.00	3333	0	107	44.8	103	0	0		s
Surr:Phenol-d6	3564	1.00	3333	0	107	47.5	117	0	0		

B - Analyte detected in the associated Method Blan

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

Sample ID LCS-12198	SampType: LCS	TestCo	de: <b>8270LL_</b> \$	Units: μg/Kg		Prep Da	te: 11/4/2	004	Run ID: 59	73G_041107	7A
Client ID: ZZZZZ	Batch ID: 12198	Test	No: <b>SW8270D</b>	ı		Analysis Da	te: 11/7/2	004	SeqNo: <b>29</b>	0729	
Analyte	Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	984	66.7	1667	0	59	30.9	106	0	0		
1,4-Dichlorobenzene	848	66.7	1667	0	50.9	31.4	98.2	0	0		
2,4-Dinitrotoluene	1290	333	1667	0	77.4	59.7	111	0	0		
2-Chlorophenol	1078	66.7	1667	0	64.7	46.2	105	0	0		
4-Chloro-3-methylphenol	1212	133	1667	0	72.7	47.4	114	0	0		
4-Nitrophenol	1287	333	1667	0	77.2	45.3	114	0	0		
Acenaphthene	1203	66.7	1667	0	72.2	48.2	105	0	0		
N-Nitrosodi-n-propylamine	1056	133	1667	0	63.4	42.4	101	0	0		
Pentachlorophenol	1105	333	1667	0	66.3	46.8	120	0	0		
Phenol	1102	133	1667	0	66.1	51.1	103	0	0		
Pyrene	1482	66.7	1667	0	88.9	56.7	130	0	0		
Sample ID LCS-12368	SampType: LCS	TestCod	de: <b>8270LL_S</b>	Units: µg/Kg		Prep Dat	e: <b>12/1/2</b> 0	004	Run ID: 59	73G_041201	Α
Client ID: ZZZZZ	Batch ID: 12368	TestN	lo: <b>SW8270D</b>			Analysis Da	te: <b>12/1/2</b> 0	004	SeqNo: 29	6313	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1212	66.7	1667	0	72.7	30.9	106	0	0		
1,4-Dichlorobenzene	1199	66.7	1667	0	71.9	31.4	98.2	0	0		
2,4-Dinitrotoluene	1519	333	1667	0	91.1	59.7	111	0	. 0		
2-Chlorophenol	1429	66.7	1667	0	85.7	46.2	105	0	0		
4-Chloro-3-methylphenol			4007	0	96.5	47.4	114	0	n		
	1608	133	1667	U	90.0	71.7	117		U		
4-Nitrophenol	1608 1863	133 333	1667	0	112	45.3	114	0	0		
71				=				•	•		
4-Nitrophenol	1863	333	1667	0	112	45.3	114	0	0		
4-Nitrophenol Acenaphthene	1863 1434	333 66.7	1667 1667	0	112 86	45.3 48.2	114 105	0	0		
4-Nitrophenol Acenaphthene N-Nitrosodi-n-propylamine	1863 1434 1484	333 66.7 133	1667 1667 1667	0 0	112 86 89	45.3 48.2 42.4	114 105 101	0 0 0	0 0		

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

Sample ID <b>0410104-06AMS</b>	SampТуре: <b>МS</b>		de: <b>8270LL_S</b>	100	-	,	te: 11/4/2			73G_041107	7A
Client ID: ZZZZZ	Batch ID: 12198	Testi	No: <b>SW8270D</b>			Analysis Da	ite: 11/7/2	004	SeqNo: 29	0730	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	975.9	92.9	2321	0	42	31.1	92.7	0	0		
1,4-Dichlorobenzene	817.1	92.9	2321	0	35.2	16.5	85.6	0	0		
2,4-Dinitrotoluene	. 1497	464	2321	0	64.5	43.4	118	0	0		
2-Chlorophenol	969.8	92.9	2321	0	41.8	36.8	103	0	0		
4-Chloro-3-methylphenol	1246	185	2321	0	53.7	49.5	119	0	0		
4-Nitrophenol	1020	464	2321	0	43.9	45	111	0	0		S
Acenaphthene	<b>144</b> 1	92.9	2321	0	62.1	45.1	102	0	0		
N-Nitrosodi-n-propylamine	981.4	185	2321	0	42.3	45.6	94.1	0	0		S
Pentachlorophenol	1121	464	2321	0	48.3	36.6	112	0	0		
Phenol	1045	185	2321	0	45	37.7	107	0	0		
Pyrene	1699	92.9	2321	0	73.2	42.4	131	0	0		
Sample ID <b>0410156-08BMS</b>	SampType: MS	TestCo	de: <b>8270LL_S</b>	Units: µg/Kg		Prep Dat	te: <b>12/1/2</b> 0	004	Run ID: <b>59</b>	73G_041201	A
Client ID: <b>LW042S (5-5.5)</b>	Batch ID: 12368	Test <b>!</b>	lo: <b>SW8270D</b>			Analysis Da	te: <b>12/2/2</b> 0	004	SeqNo: 29	6316	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	973.3	66.7	1667	0	58.4	31.1	92.7	0	0		
1,4-Dichlorobenzene	1001	66.7	1667	0	60.1	16.5	85.6	0	0		
2,4-Dinitrotoluene	1755	333	1667	0	105	43.4	118	0	0		
2-Chlorophenol	1889	66.7	1667	0	. 113	36.8	103	0	0		S
4-Chloro-3-methylphenol	2173	133	1667	0	130	49.5	119	0	0		Ş
4-Nitrophenol	1933	333	1667	0	116	45	111	0	0		S
Acenaphthene	1309	66.7	1667	0	78.5	45.1	102	0	0		
ALADY P	1891	133	1667	0	113	45.6	94.1	0	0		s
N-Nitrosodi-n-propylamine				•	41.6	36.6	112	0	0		
N-Nitrosodi-n-propylamine Pentachlorophenol	693	333	1667	0	41.0	30.0	112	U	U		
	693 2252	333 133	1667 1667	0	135	37.7	107	0	0		s

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID 0410104-06AMSD	SampType: <b>MSD</b>		de: <b>8270LL_</b> \$		-	Prep Da				73G_041107	Ά
Client ID: ZZZZZ	Batch ID: 12198	TestN	lo: <b>SW8270</b> D	•		Analysis Da	te: 11/7/2	004	SeqNo: 29	0731	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	977.7	92.9	2321	0	42.1	31.1	92.7	975.9	0.190	20	
1,4-Dichlorobenzene	853.8	92.9	2321	0	36.8	16.5	85.6	817.1	4.39	20	
2,4-Dinitrotoluene	1163	464	2321	0	50.1	43.4	118	1497	25.1	20	R
2-Chlorophenol	894.6	92.9	2321	0	38.5	36.8	103	969.8	8.07	20	
4-Chloro-3-methylphenol	1012	185	2321	0	43.6	49.5	119	1246	20.7	20	SR
4-Nitrophenol	770.2	464	2321	0	33.2	45	111	1020	27.9	20	SR
Acenaphthene	1246	92.9	2321	0	53.7	45.1	102	1441	14.5	20	
N-Nitrosodi-n-propylamine	906.2	185	2321	0	39	45.6	94.1	981.4	7.97	20	S
Pentachlorophenol	847.7	464	2321	0	36.5	36.6	112	1121	27.7	20	SR
Phenol	899.7	185	2321	0	38.8	37.7	107	1045	14.9	20	
Pyrene	1383	92.9	2321	0	59.6	42.4	131	1699	20.5	20	R
Sample ID <b>0410156-08BMSD</b>	SampType: MSD	TestCoo	de: <b>8270LL_S</b>	Units: µg/Kg		Prep Dat	e: <b>12/1/2</b> 0	004	Run ID: 59'	73G_041201	A
Client ID: <b>LW042S (5-5.5)</b>	Batch ID: 12368	TestN	lo: <b>SW8270D</b>			Analysis Da	te <sup>.</sup> 12/2/20	004	SegNo: 29	6317	
	2000112					,	,_,_,		•		
Analyte	Result	PQL	SPK value		%REC	,		RPD Ref Val	%RPD	RPDLimit	Qual
Analyte 1,2,4-Trichlorobenzene			SPK value			,		RPD Ref Val	%RPD 4.85		Qual
, , , , , , , , , , , , , , , , , , , ,	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit			RPDLimit	Qual
1,2,4-Trichlorobenzene	Result	PQL 66.7	1667	SPK Ref Val	%REC 61.3	LowLimit 31.1	HighLimit 92.7	973.3	4.85	RPDLimit	Qual
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene	Result 1022 1066	PQL 66.7 66.7	1667 1667	SPK Ref Val  0 0	%REC 61.3 63.9	231.1 16.5	HighLimit 92.7 85.6	973.3 1001	4.85 6.26	RPDLimit 20 20	Qual S
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene	Result 1022 1066 1721	PQL 66.7 66.7 333	1667 1667 1667	SPK Ref Val  0 0 0	%REC 61.3 63.9 103	31.1 16.5 43.4	HighLimit 92.7 85.6 118	973.3 1001 1755	4.85 6.26 1.96	RPDLimit 20 20 20	
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol	Result 1022 1066 1721 2017	PQL 66.7 66.7 333 66.7	1667 1667 1667 1667	SPK Ref Val  0 0 0 0	%REC 61.3 63.9 103 121	31.1 16.5 43.4 36.8	92.7 85.6 118 103	973.3 1001 1755 1889	4.85 6.26 1.96 6.59	RPDLimit 20 20 20 20 20	S
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol	Result  1022 1066 1721 2017 2166	PQL 66.7 66.7 333 66.7 133	1667 1667 1667 1667	SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%REC 61.3 63.9 103 121 130	31.1 16.5 43.4 36.8 49.5	92.7 85.6 118 103 119	973.3 1001 1755 1889 2173	4.85 6.26 1.96 6.59 0.338	RPDLimit  20 20 20 20 20 20 20	S S
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol	Result  1022 1066 1721 2017 2166 2117	PQL 66.7 66.7 333 66.7 133 333	1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0	%REC 61.3 63.9 103 121 130 127	31.1 16.5 43.4 36.8 49.5 45	92.7 85.6 118 103 119 111	973.3 1001 1755 1889 2173	4.85 6.26 1.96 6.59 0.338 9.07	RPDLimit  20 20 20 20 20 20 20 20	S S
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene	Result  1022 1066 1721 2017 2166 2117 1342	PQL 66.7 66.7 333 66.7 133 333 66.7	1667 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0 0 0	%REC 61.3 63.9 103 121 130 127 80.5	31.1 16.5 43.4 36.8 49.5 45	92.7 85.6 118 103 119 111 102	973.3 1001 1755 1889 2173 1933 1309	4.85 6.26 1.96 6.59 0.338 9.07 2.49	RPDLimit  20 20 20 20 20 20 20 20 20 20	S S S
1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene N-Nitrosodi-n-propylamine	Result  1022 1066 1721 2017 2166 2117 1342 2019	PQL 66.7 66.7 333 66.7 133 333 66.7 133	1667 1667 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0 0 0 0 0	%REC 61.3 63.9 103 121 130 127 80.5 121	31.1 16.5 43.4 36.8 49.5 45 45.1 45.6	92.7 85.6 118 103 119 111 102 94.1	973.3 1001 1755 1889 2173 1933 1309 1891	4.85 6.26 1.96 6.59 0.338 9.07 2.49 6.56	RPDLimit  20 20 20 20 20 20 20 20 20 20 20	S S S

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

R - RPD outside accepted recovery limits

Page 18 of 26

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

# ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID CCV-12198	SampType: CCV	TestCo	de: <b>8270LL_</b> \$	Units: μg/Kg		Prep Da	te:		Run ID: 59	73G_041107	7A
Client ID: ZZZZZ	Batch ID: 12198	Test	No: <b>SW8270</b> D	ı		Analysis Da	te: <b>11/7/2</b>	004	SeqNo: 29	0727	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	1284	66.7	1333	0	96.3	80	120	0	0		
2,4,6-Trichlorophenol	1328	333	1333	0	99.6	80	120	0	0		
2,4-Dichlorophenol	1358	200	1333	0	102	80	120	0	0		
2-Nitrophenol	1404	333	1333	0	105	80	120	0	0		
4-Chloro-3-methylphenol	1366	133	1333	0	102	80	120	0	0		
Acenaphthene	· 1272	66.7	1333	0	95.4	80	120	0	0		
Benzo(a)pyrene	1443	66.7	1333	0	108	80	120	0	0		
Di-n-octylphthalate	1403	66.7	1333	0	105	80	120	0	0		
Fluoranthene	1388	66.7	1333	0	104	80	120	0	0		
Hexachlorobutadiene	1256	133	1333	0	94.2	80	120	0	0	,	
N-Nitrosodiphenylamine	1429	66.7	1333	0	107	80	120	0	0		
Pentachlorophenol	1342	333	1333	0	101	80	120	0	0		
Phenol	1314	133	1333	0	98.6	80	120	0	0		
Sample ID CCV-12368	SampType: <b>CCV</b>	TestCod	de: <b>8270</b> LL_S	Units: μg/Kg		Prep Dat	e:		Run ID: <b>59</b> 1	73G_041201	A
Client ID: ZZZZZ	Batch ID: 12368	TestN	lo: <b>SW8270D</b>			Analysis Da	te: <b>12/1/2</b> 0	004	SeqNo: <b>29</b> 6	6310	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte 1,4-Dichlorobenzene	Result 1640	PQL 66.7	SPK value	SPK Ref Val	%REC 98.4	LowLimit 80	HighLimit	RPD Ref Val	%RPD 0	RPDLimit	Qual
-				y						RPDLimit	Qual
1,4-Dichlorobenzene	1640	66.7	1667	0	98.4	80	120	0	0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol	1640 1773	66.7	1667 1667	0	98.4 106	80 80	120 120	0	0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol	1640 1773 1769	66.7 333 200	1667 1667 1667	0 0 0	98.4 106 106	80 80 80	120 120 120	0 0 0	0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol	1640 1773 1769 1879	66.7 333 200 333	1667 1667 1667 1667	0 0 0	98.4 106 106 113	80 80 80 80	120 120 120 120	0 0 0 0	0 0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol	1640 1773 1769 1879 1951	66.7 333 200 333 133	1667 1667 1667 1667	0 0 0 0	98.4 106 106 113 117	80 80 80 80	120 120 120 120 120	0 0 0 0	0 0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene	1640 1773 1769 1879 1951 1796	66.7 333 200 333 133 66.7	1667 1667 1667 1667 1667	0 0 0 0 0	98.4 106 106 113 117 108	80 80 80 80 80	120 120 120 120 120 120	0 0 0 0 0	0 0 0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene	1640 1773 1769 1879 1951 1796	66.7 333 200 333 133 66.7 66.7	1667 1667 1667 1667 1667 1667	0 0 0 0 0	98.4 106 106 113 117 108 117	80 80 80 80 80 80	120 120 120 120 120 120 120	0 0 0 0 0 0	0 0 0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate	1640 1773 1769 1879 1951 1796 1954 1967	66.7 333 200 333 133 66.7 66.7	1667 1667 1667 1667 1667 1667 1667	0 0 0 0 0 0	98.4 106 106 113 117 108 117 118	80 80 80 80 80 80 80	120 120 120 120 120 120 120 120	0 0 0 0 0 0	0 0 0 0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate Fluoranthene	1640 1773 1769 1879 1951 1796 1954 1967	66.7 333 200 333 133 66.7 66.7 66.7	1667 1667 1667 1667 1667 1667 1667 1667	0 0 0 0 0 0 0	98.4 106 106 113 117 108 117 118	80 80 80 80 80 80 80	120 120 120 120 120 120 120 120 120	0 0 0 0 0 0 0	0 0 0 0 0 0 0	RPDLimit	Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate Fluoranthene Hexachlorobutadiene	1640 1773 1769 1879 1951 1796 1954 1967 1686 1610	66.7 333 200 333 133 66.7 66.7 66.7 133	1667 1667 1667 1667 1667 1667 1667 1667	0 0 0 0 0 0 0 0	98.4 106 106 113 117 108 117 118 101 96.6	80 80 80 80 80 80 80 80	120 120 120 120 120 120 120 120 120 120	0 0 0 0 0 0 0	0 0 0 0 0 0 0	RPDLimit	Qual

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 19 of 26

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID CCV-12368	SampType: <b>CCV</b>	TestCo	de: <b>8270LL_S</b>	Units: μg/Kg		Prep Da	te:		Run ID: 59	73G_041201	1A
Client ID: ZZZZZ	Batch ID: 12368	Test	No: <b>SW8270D</b>			Analysis Da	ite: 12/2/2	004	SeqNo: 29	6314	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	1692	66.7	1667	0	102	80	120	0	0		
2,4,6-Trichlorophenol	1599	333	1667	0	95.9	80	120	0	0		
2,4-Dichlorophenol	1800	200	1667	0	108	80	120	0	0		
2-Nitrophenol	1889	333	1667	0	113	80	120	0	0		
4-Chloro-3-methylphenol	1983	133	1667	0	119	80	120	0	0		
Acenaphthene	1825	66.7	1667	0	110	80	120	0	0		
Benzo(a)pyrene	1956	66.7	1667	0	117	80	120	0	0		
Di-n-octylphthalate	1996	66.7	1667	0	120	80	120	0	0		
Fluoranthene	1610	66.7	1667	0	96.6	80	120	0	0		
Hexachlorobutadiene	1669	133	1667	0	100	80	120	0	0		
N-Nitrosodiphenylamine	1979	66.7	1667	0	119	80	120	0	0		
Pentachlorophenol	1359	333	1667	0	81.5	80	120	0	0		
Phenol	1905	133	1667	0	114	80	120	0	0		

S - Spike Recovery outside accepted recovery limits

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX\_S

Sample ID	MBLK	SampType: <b>MBLK</b>	TestCode: NWTPHDX_S Units: mg/Kg	Prep Date: 11/5/2004	RunID: GC-M_041108E
Client ID:	ZZZZZ	Batch ID: 12213	TestNo: <b>NWTPH-Dx</b>	Analysis Date: 11/8/2004	SeqNo: <b>291170</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel	,	ND	15.0	•	
Lube Oil		ND	50.0		
Surr: o-	Terphenyl	37.48	1.00 33.33 0	112 50 150 0	0
Sample ID	MBLK	SampType: <b>MBLK</b>	TestCode: NWTPHDX_S Units: mg/Kg	Prep Date: 11/5/2004	Run ID: <b>GC-M_041110A</b>
Client ID:	ZZZZZ	Batch ID: 12213	TestNo: <b>NWTPH-Dx</b>	Analysis Date: 11/10/2004	SeqNo: <b>291685</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel		ND	15.0		
Lube Oil		ND	50.0		
Surr: o-	Terphenyl	30.58	1.00 33.33 0	91.8 50 150 0	0
Sample ID	MBLK	SampType: <b>MBLK</b>	TestCode: NWTPHDX_S Units: mg/Kg	Prep Date: 11/30/2004	Run ID: GC-M_041202A
Client ID:	ZZZZZ	Batch ID: 12362	TestNo: NWTPH-Dx	Analysis Date: 12/2/2004	SeqNo: <b>296610</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel		ND	15.0	•	
Lube Oil		ND	50.0		
Surr: o-1	Terphenyl	32.83	1.00 33.33 0	98.5 50 150 0	0
Sample ID	LCS	SampType: LCS	TestCode: NWTPHDX_S Units: mg/Kg	Prep Date: 11/5/2004	Run ID: <b>GC-M_041108E</b>
Client ID:	ZZZZZ	Batch ID: 12213	TestNo: NWTPH-Dx	Analysis Date: 11/8/2004	SeqNo: <b>291171</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Diesel		166.3	15.0 167.6 0	99.2 76.3 122 0	0
Lube Oil		188	50.0 167.6 0	112 69.9 127 0	0

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX\_S

Sample ID	LCS	SampType:	LCS	TestCod	e: <b>NWTPHD</b>	X_S Units: mg	ı/Kg		Prep Dat	e: <b>11/5/2</b>	004	Run iD: G	C-M_041110	A
Client ID:	ZZZZZ	Batch ID:	12213	TestN	o: <b>NWTPH-</b> [	Оx			Analysis Dat	te: <b>11/10</b> /	2004	SeqNo: 29	1686	
Analyte			Result	PQL	SPK value	SPK Ref Val	%RE	C	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			163.8	15.0	167.6	0	9,	7.7	76.3	122	0	0	·	
Lube Oil			185.3	50.0	167.6	0	1	11	69.9	127	0	0		
Sample ID	LCS	SampType:	LCS	TestCod	e: <b>NWTPHD</b>	X_S Units: mg	/Kg		Prep Date	e: <b>11/30</b> /	2004	Run ID: G	C-M_041202	Α
Client ID:	ZZZZZ	Batch ID:	12362	TestN	o: <b>NWTPH-</b> E	Эx			Analysis Dat	te: <b>12/2/2</b>	004	SeqNo: 29	6611	
Analyte			Result	PQL	SPK value	SPK Ref Val	%RE	EC.	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			156.1	15.0	167.6	0	90	3.1	76.3	122	0	0		
Lube Oil			180.6	50.0	167.6	0	1	80	69.9	127	0	0		
Sample ID	0410156-03ADUP	SampType:	DUP	TestCod	e: <b>NWTPHD</b>	X_S Units: mg	/Kg-dry		Prep Date	e: <b>11/5/2</b>	004	Run ID: G0	C-M_041108	E
Client ID:	LW041S(1-1.5)	Batch ID:	12213	TestN	o: <b>NWTPH-</b> C	)x			Analysis Dat	e: <b>11/8/2</b>	004	SeqNo: 29	1188	
Analyte			Result	PQL	SPK value	SPK Ref Val	%RE	:C	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			ND	16.5	0	0		0	0	0	0	0	20	
Lube Oil			ND	54.8	0	0		0	0	0	0	0	20	
Sample ID	0410163-01ADUP	SampType:	DUP	TestCode	e: <b>NWTPHD</b>	X_S Units: mg	/Kg-dry		Prep Date	e: 11/5/2	004	Run ID: G(	C-M_041108	E
Client ID:	ZZZZZ	Batch ID:	12213	TestNo	o: <b>NWTPH-D</b>	×		,	Analysis Dat	e: <b>11/8/2</b> 0	004	SeqNo: 29	1189	
Analyte			Result	PQL	SPK value	SPK Ref Val	%RE	С	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			145.8	17.9	0	0		0	0	0	172.7	16.9	20	
Lube Oil			ND	59.6	0	0		0	0	0	0	0	20	
Sample ID	0411142-01ADUP	SampType:	DUP	TestCode	: NWTPHD	X_S Units: mg	/Kg-dry		Prep Date	e: 11/30/2	2004	Run ID: GC	-M_041202	A
Client ID:	ZZZZZ	Batch ID:	12362	TestNo	: NWTPH-D	x		,	Analysis Dat	e: <b>12/2/2</b> 0	004	SeqNo: 29	6633	
Analyte			Result	PQL	SPK value	SPK Ref Val	%RE	С	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			ND	19.8	0	0		0	0	0	0	0	20	
Lube Oil			ND	66.1	0	0		0	0	0	0	0	20	

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT: Time Oil Co.

**WorkOrder:** 0410156

Project: NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX\_S

Sample ID Client ID:	0411142-02ADUP ZZZZZ	SampType: Batch ID:			de: NWTPHC	DX_S Units: mg/	• •	Prep Da Analysis Da	ite: 11/30/ ate: 12/2/2		Run ID: G	C-M_041202 96634	2A
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			ND	20.3	0	0	0	0	0	0	0	20	ı
Lube Oil		,	ND	67.7	0	0	0	0	0	0	0	20	
Sample ID	CCV	SampType:	ccv	TestCoo	de: <b>NWTPHD</b>	X_S Units: mg/l	(g	Prep Da	te:		Run ID: G	C-M_041108	BE
Client ID:	ZZZZZ	Batch ID:	12213	TestN	lo: <b>NWTPH-</b> [	Ох		Analysis Da	ate: 11/8/2	004	SeqNo: 29	1172	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			704.3	15.0	667.9	0	105	85	115	0	0		
Lube Oil		·	397	50.0	339.3	0	117	85	115	0	0		SC
Sample ID	ccv	SampType:	CCV	TestCod	le: <b>NWTPHD</b>	X_S Units: mg/l	(g	Prep Da	te:		Run ID: G	C-M_041108	BE
Client ID:	ZZZZZ	Batch ID:	12213	TestN	lo: <b>NWTPH-</b> E	Эx		Analysis Da	ite: 11/8/2	004	SeqNo: 29	1190	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			676.8	15.0	667.9	0	101	85	115	0	0		
Lube Oil			395.4	50.0	339.3	0	117	85	115	0	0		SC
Sample ID	ccv	SampType:	CCV	TestCod	le: NWTPHD	X_S Units: mg/k	(g	Prep Da	te:		Run ID: G0	C-M_041110	A
Client ID:	ZZZZZ	Batch ID:	12213	TestN	lo: <b>NWTPH-</b> D	Эх		Analysis Da	te: <b>11/10</b> /2	2004	SeqNo: 29	1687	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			340.1	15.0	334	0	102	85	115	0	0	· · · · · · · · · · · · · · · · · · ·	
Lube Oil			368.5	50.0	333.3	0	111	85	115	0	0		
Sample ID	ccv	SampType:	CCV	TestCod	e: <b>NWTPHD</b>	X_S Units: mg/k	g	Prep Dat	te:	, , , , , , , , , , , , , , , , , , , ,	Run iD: G0	C-M_041110	Α
Client ID:	ZZZZZ	Batch ID:	12213	TestN	o: <b>NWTPH-</b> C	Эх		Analysis Da	te: 11/10/2	2004	SeqNo: 29	1695	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel		-	343.6	15.0	334	0	103	85	115	0	0		
Lube Oil			352.2	50.0	333.3	0	106	85	115	0	0		

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX\_S

Sample ID CCV Client ID: ZZZZZ	SampType: CCV  Batch ID: 12362	TestCode: <b>NWTPH</b> TestNo: <b>NWTPH</b>	DX_S Units: mg/Kg		Prep Da Analysis Da		004	Run ID: Go SeqNo: 29	C-M_041202 96612	A
Analyte	Result	PQL SPK value	e SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Lube Oil	685.4 228.5	15.0 667.9 50.0 250	_	103 91.4	85 85	115 115	0 0	0		
Sample ID CCV Client ID: ZZZZZ	SampType: <b>CCV</b> Batch ID: <b>12362</b>	TestCode: <b>NWTPH</b> TestNo: <b>NWTPH</b>	DX_S Units: mg/Kg ·Dx		Prep Dat Analysis Da		004	Run ID: G0 SeqNo: 29	C-M_041202 6635	4
,	' ''	TestNo: <b>NWTPH</b> -	_	%REC	Analysis Da	te: <b>12/2/2</b>	<b>004</b> RPD Ref Val		_	<b>4</b> Qual

CLIENT:

Time Oil Co.

WorkOrder:

0410156

Project:

NW Terminal Additional Well Install Phase III

#### **ANALYTICAL QC SUMMARY REPORT**

TestCode: NWTPHGX\_S

01- 10	MOLIZ	O T	MDUK	T 10		× 6 11.7.		D D	441615		D. ID. 00 H 644464	
Sample ID		SampType:				X_S Units: mg.	_	•	te: 11/1/2		Run ID: <b>GC-H_04110</b> 1	Α
Client ID:	ZZZZZ	Batch ID:	12161	TestN	lo: <b>NWTPH-C</b>	3x		Analysis Da	te: 11/1/2	004	SeqNo: <b>288635</b>	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Gasoline			ND	2.50								
Surr:4-B	Bromofluorobenzene		104.5	1.00	100	0	105	50	150	0	0	
Sample ID	MBLK	SampType:	MBLK	TestCod	le: NWTPHG	X_S Units: mg/	/Kg	Prep Dat	e: 11/1/2	004	Run ID: GC-H_041102	A
Client ID:	ZZZZZ	Batch ID:	12161	TestN	lo: NWTPH-0	3x		Analysis Da	te: 11/2/2	004	SeqNo: <b>288955</b>	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Gasoline			ND	2.50								
Surr:4-B	romofluorobenzene		99.89	1.00	100	0	99.9	50	150	0	0	
Sample ID	LCS	SampType:	LCS	TestCod	le: <b>NWTPHG</b>	X_S Units: mg/	'Kg	Prep Dat	e: <b>11/1/2</b>	004	RuniD: <b>GC-H_041101</b>	A
Client ID:	ZZZZZ	Batch ID:	12161	TestN	lo: <b>NWTPH-G</b>	ix		Analysis Dat	te: 11/1/2	004	SeqNo: <b>288636</b>	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Gasoline		,	34.43	2.50	30	0	115	53.5	121	0	0	
Sample ID	0410156-02ADUP	SampType:	DUP	TestCod	e: <b>NWTPHG</b>	<b>X_S</b> Units: <b>mg</b> /	Kg-dry	Prep Date	e: 11/1/20	004	Run ID: GC-H_041101	Α
Client ID:	LW041S(0-0.5)	Batch ID:	12161	TestN	o: <b>NWTPH-G</b>	x		Analysis Dat	te: 11/1/20	004	SeqNo: <b>288653</b>	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Gasoline			ND	2.74	0	0	0	0	0	0	0 20	
Sample ID	0410156-03ADUP	SampType:	DUP	TestCod	e: <b>NWTPHG</b>	<b>(_S</b> Units: <b>mg</b> /	Kg-dry	Prep Date	e: <b>11/1/2</b> 0	004	Run ID: <b>GC-H_041101</b> .	Α
Client ID:	LW041S(1-1.5)	Batch ID:	12161	TestN	o: <b>NWTPH-G</b>	x		Analysis Dat	e: <b>11/1/2</b> 0	004	SeqNo: <b>288654</b>	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Gasoline	;		ND	2.74	0	0	0	0	0	0	0 20	

CLIENT:

Time Oil Co.

Work Order:

0410156

Project:

NW Terminal Additional Well Install Phase III

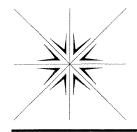
#### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX\_S

Sample ID	ccv	SampType: <b>CCV</b>	TestCode: NWTPHGX_S Units: mg/K	(g Prep Date:	Run ID: <b>GC-H_041101A</b>
Client ID:	ZZZZZ	Batch ID: 12161	TestNo: <b>NWTPH-Gx</b>	Analysis Date: 11/1/2004	SeqNo: <b>288637</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline		2212	2.50 2000 0	111 80 120 0	0
Sample ID	CCV	SampType: CCV	TestCode: NWTPHGX_S Units: mg/K	g Prep Date:	Run ID: GC-H_041101A
Client ID:	ZZZZZ	Batch ID: 12161	TestNo: <b>NWTPH-Gx</b>	Analysis Date: 11/1/2004	SeqNo: <b>288655</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Gasoline		2828	2.50 2500 0	113 80 120 0	0
Sample ID	ccv	SampType: <b>CCV</b>	TestCode: NWTPHGX_S Units: mg/K	g Prep Date:	Run ID: <b>GC-H_041102A</b>
Sample ID Client ID:	CCV ZZZZZ	SampType: CCV Batch ID: 12161	TestCode: NWTPHGX_S Units: mg/K TestNo: NWTPH-Gx	g Prep Date: Analysis Date: 11/2/2004	Run ID: <b>GC-H_041102A</b> SeqNo: <b>288956</b>
· '			-	•	1000
Client ID:		Batch ID: <b>12161</b>	TestNo: <b>NWTPH-Gx</b>	Analysis Date: 11/2/2004	SeqNo: <b>288956</b>
Client ID: Analyte	ZZZZZ	Batch ID: 12161  Result	TestNo: <b>NWTPH-Gx</b> PQL SPK value SPK Ref Val	Analysis Date: 11/2/2004  %REC LowLimit HighLimit RPD Ref Val  94.8 80 120 0	SeqNo: <b>288956</b> %RPD RPDLimit Qual
Client ID: Analyte Gasoline	ZZZZZ	Batch ID: <b>12161</b> Result  2369	TestNo: NWTPH-Gx  PQL SPK value SPK Ref Val  2.50 2500 0	Analysis Date: 11/2/2004  %REC LowLimit HighLimit RPD Ref Val  94.8 80 120 0	SeqNo: <b>288956</b> %RPD RPDLimit Qual  0
Client ID: Analyte Gasoline Sample ID	CCV	Batch ID: 12161  Result 2369  SampType: CCV	TestNo: NWTPH-Gx  PQL SPK value SPK Ref Val  2.50 2500 0  TestCode: NWTPHGX_S Units: mg/K	Analysis Date: 11/2/2004           %REC         LowLimit         HighLimit         RPD Ref Val           94.8         80         120         0           g         Prep Date:	SeqNo: <b>288956</b> %RPD RPDLimit Qual  0  Run ID: <b>GC-H_041102A</b>

#### KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- CR Result for this analyte maybe biased due to interferences.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MFL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- S Recovery is outside control limits.
- SC Closing CCV exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- \* The result for this parameter was greater that the maximum contaminant level of the TCLP regulatory limit.



19761 S.W. 95th Place Tualatin, OR 97062 (503) 612-9007 Fax (503) 612-8572 1 (877) 612-9007

November 16, 2004

DEC - 9 2004

Mark Chandler Time Oil Co. 2737 West Commodore Way Seattle, WA 98199-1257

TEL: (206) 285-2400 FAX (206) 285-7833

RE: NW Terminal Additional Well Install Phase

Dear Mark Chandler:

Order No.: 0411033

Specialty Analytical received 7 samples on 11/4/2004 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Ned Engleson

Project Manager

Technical-Review

CC:

Terry McGoorty @ Landau Associates

BZTO104(e)023729	

Seattle (Edmonds) (425) 778-0907 □ Tacoma (253) 926-2493		XV 0411032	11/1
□ <b>Spokane</b> (509) 327-9737			Date
LANDAU Portland (Tigard) (503) 443-6010	Chain-of-Custody Rec	cord	Pageof
			/
Project Name 11 MQ 01 Project I	1001.00 F	esting Parameters	
Project Location/Event RH ASCTIF Add 1772	marwallsone / / /		T
Sampler's Name CHRISY JUHOS			Turnaround Time
Project Contact 41215T4 JOHNS			Accelerated
Send Results To See Comment			
Sample I.D. Date Time	No. of Matrix Containers	/// Observa	tions/Comments
	2014 Z 4604)		SEND PDF
400405(21-21.5) 11/1/04 1020			ARK CHANDLEK
(2) 45D (21-28) 11/104 16/5		4 Reps	KAH BROOKS,
LUO 3LETS (7-8) 1/2/04/1020 40-03775/6-7) 1, 1325		1 (AAC)	monethisof
LW038D/7-8 1500		TOPE	4 ANDORTY
40039715-6 11/3/14/1000		A Elsi	STOAME
	( ) ( )	of office.	(30)
			,
Special Shipment/Handling or Storage Requirements	07/08	Method of Shipment	POP
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Printed Name	Printed Name	Printed Name	
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	,	1	1/21
Date 11/4/04 Time 12:15 Date 11/4	D4_ Time Date	Time Date _///-	1/04 Time 1605

Lab Order:

0411033

Client:

Time Oil Co.

Project:

NW Terminal Additional Well Inst

# **DATESREPORT**

Analysis Dat	TCLP Date Prep Date	Test Name	Matrix	Collection Date	Client Sample ID	Sample ID
11/4/2004		HOLD per Client Request	Soil	11/1/2004 1:30:00 PM	LW040A(20-21)	0411033-01A
11/11/2004	11/8/2004	NWTPH-Dx		11/1/2004 10:30:00 AM	LW040S(21-21.5)	0411033-02A
11/5/2004	11/4/2004	NWTPH-Gx				
11/9/2004		PERCENTMOISTURE				
11/9/2004	11/9/2004	SEMI-VOLATILEORGANICS				0411033-02B
11/10/2004	11/5/2004	Total Metals by ICP				
11/11/2004	11/5/2004	Total Metals by ICP				
11/11/2004	11/8/2004	NWTPH-Dx		11/1/2004 4:15:00 PM	LW045D(27-28)	0411033-03A
11/5/2004	11/4/2004	NWTPH-Gx				
11/9/2004		PERCENTMOISTURE				
11/9/2004	11/9/2004	SEMI-VOLATILEORGANICS				0411033-03B
11/11/2004	11/5/2004	Total Metals by ICP				
11/10/2004	11/5/2004	Total Metals by ICP				
11/11/2004	11/8/2004	NWTPH-Dx		11/2/2004 10:20:00 AM	LW036D(7-8)	0411033-04A
11/5/2004	11/4/2004	NWTPH-Gx				
11/9/2004		PERCENTMOISTURE				
11/9/2004	11/9/2004	SEMI-VOLATILEORGANICS				0411033-04B
11/11/2004	11/5/2004	Total Metals by ICP				
11/10/2004	11/5/2004	Total Metals by ICP				
11/11/2004	11/8/2004	NWTPH-Dx		11/2/2004 1:25:00 PM	LW037D(6-7)	0411033-05A
11/5/2004	11/4/2004	NWTPH-Gx				
11/9/2004		PERCENTMOISTURE				
11/9/2004	11/9/2004	SEMI-VOLATILEORGANICS				0411033-05B
11/10/2004	11/5/2004	Total Metals by ICP				
11/11/2004	11/5/2004	Total Metals by ICP				
11/11/2004	11/8/2004	NWTPH-Dx		11/2/2004 3:00:00 PM	LW038D(7-8)	0411033-06A
11/5/2004	11/4/2004	NWTPH-Gx				
11/9/2004		PERCENTMOISTURE				

Lab Order:

0411033

Client:

Time Oil Co.

Project:

NW Terminal Additional Well Inst

# **DATESREPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Dat
0411033-06B	LW038D(7-8)	11/2/2004 3:00:00 PM	Soil	SEMI-VOLATILEORGANICS		11/10/2004	11/11/2004
				Total Metals by ICP		11/5/2004	11/10/2004
				Total Metals by ICP		11/5/2004	11/11/2004
0411033-07A	LW039D(5-6)	11/3/2004 10:00:00 AM		NWTPH-Dx		11/8/2004	11/11/2004
				NWTPH-Gx		11/4/2004	11/5/2004
				NWTPH-Gx		11/4/2004	11/5/2004
				PERCENTMOISTURE			11/9/2004
0411033-07B				SEMI-VOLATILEORGANICS		11/10/2004	11/11/2004
				Total Metals by ICP		11/5/2004	11/10/2004
				Total Metals by ICP		11/5/2004	11/11/2004

**Date:** 16-Nov-04

CLIENT:

Time Oil Co.

Lab Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

Hold

0411033-01

**Collection Date:** 11/1/2004 1:30:00 PM

Matrix: SOIL

Analyses

Client Sample ID:

LW040A (20-21)

Limit Qual Units

DF

1

Date Analyzed

HOLD PER CLIENT REQUEST

HOLD

PER CLIENT

Result

Analyst: **ADM** 11/4/2004

Page 1 of 19

Date: 16-Nov-04

**CLIENT:** 

Time Oil Co.

Lab Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0411033-02

**Collection Date:** 11/1/2004 10:30:00 AM

Client Sample ID: LW040S (21-21.5)				Matrix:	SOIL	
Analyses	Result	Limit	Qual Uni	ts	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	ND	17.4	mg/l	(g-dry	1	11/11/2004
Lube Oil	ND	57.9	mg/l	(g-dry	1	11/11/2004
Surr: o-Terphenyl	69.4	50-150	%RE	EC .	1	11/11/2004
NWTPH-GX		NWTPH-GX				Analyst: <b>tif</b>
Gasoline	ND	2.89	mg/ł	(g-dry	1	11/5/2004
Surr: 4-Bromofluorobenzene	106	50-150	%RE	EC	1	11/5/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.61	mg/k	⟨g	1	11/10/2004 6:45:13 PM
Chromium	12.8	0.403	mg/k	(g	1	11/11/2004 5:15:30 PM
Copper	12.3	0.806	mg/k	(g	1	11/10/2004 6:45:13 PM
Lead	ND	1.61	mg/k	(g	1	11/11/2004 5:15:30 PM
Nickel	14.5	0.403	mg/k	(g	1	11/11/2004 5:15:30 PM
Zinc	50.0	0.806	mg/k	(g	1	11/10/2004 6:45:13 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/K	g	1	11/9/2004 4:52:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/K	g	1	11/9/2004 4:52:00 PM
4,3-Dichlorobenzene	ND	66.7	μg/K	g	1	11/9/2004 4:52:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/K	g	1	11/9/2004 4:52:00 PM
2,4,5-Trichlorophenol	ND	333	μg/K	g	1	11/9/2004 4:52:00 PM
2,4,6-Trichlorophenol	ND	333	μg/K	g	1	11/9/2004 4:52:00 PM
2,4-Dichlorophenol	ND	200	μg/K	g	1	11/9/2004 4:52:00 PM
2,4-Dimethylphenol	ND	200	µg/K	g	1	11/9/2004 4:52:00 PM
2,4-Dinitrophenol	ND	333	μg/K	g	1	11/9/2004 4:52:00 PM
2,4-Dinitrotoluene	ND	333	μg/K	g	1	11/9/2004 4:52:00 PM
2,6-Dinitrotoluene	ND	333	μg/K		1	11/9/2004 4:52:00 PM
2-Chloronaphthalene	ND	66.7	μg/K		1	11/9/2004 4:52:00 PM
2-Chlorophenol	ND	66.7	μg/K		1	11/9/2004 4:52:00 PM
2-Methylnaphthalene	ND	66.7	μg/K	g	1	11/9/2004 4:52:00 PM
2-Methylphenol	ND	133	μg/K		1	11/9/2004 4:52:00 PM
2-Nitroaniline	ND	333	μg/K		1	11/9/2004 4:52:00 PM
2-Nitrophenol	ND	333	µg/K		1	11/9/2004 4:52:00 PM
3,3-Dichlorobenzidine	ND	333	μg/K	g	1	11/9/2004 4:52:00 PM
3-&4-Methylphenol	ND	333	μg/K		1	11/9/2004 4:52:00 PM
3-Nitroaniline	ND	333	μg/K		1	11/9/2004 4:52:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/K		1	11/9/2004 4:52:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/K		1	11/9/2004 4:52:00 PM
4-Chloro-3-methylphenol	ND	133	μg/K	g	1	11/9/2004 4:52:00 PM
4-Chloroaniline	ND	200	μg/K	g	1	11/9/2004 4:52:00 PM

**Date:** 16-Nov-04

CLIENT: Time Oil Co.					Lab Order:	0411033
Project: NW Terminal Additiona	l Well Insta	all Phase III				
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
4-Chlorophenyl phenyl ether	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
4-Nitroaniline	ND	333	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
4-Nitrophenol	ND	333	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Acenaphthene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Acenaphthylene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Anthracene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benz(a)anthracene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benzo(a)pyrene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benzo(b)fluoranthene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benzo(g,h,i)perylene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benzo(k)fluoranthene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benzoic Acid	ND	667	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Benzyl Alcohol	ND	333	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Bis(2-chloroethyl)ether	ND	133	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Butyl benzyl phthalate	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Carbazole	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Chrysene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Di-n-butyl phthalate	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Di-n-octyl phthalate	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Dibenz(a,h)anthracene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Dibenzofuran	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Diethyl phthalate	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Dimethyl phthalate	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
Fluoranthene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Fluorene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Hexachlorobenzene	ND	66.7	μ	ıg/Kg	1	11/9/2004 4:52:00 PM
Hexachlorobutadiene	ND	133	μ	g/Kg	1	11/9/2004 4:52:00 PM
Hexachlorocyclopentadiene	ND	333		g/Kg	1	11/9/2004 4:52:00 PM
Hexachloroethane	ND	133	μ	g/Kg	1	11/9/2004 4:52:00 PM
Indeno(1,2,3-cd)pyrene	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
Isophorone	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
N-Nitrosodi-n-propylamine	ND	133	μ	g/Kg	1	11/9/2004 4:52:00 PM
N-Nitrosodimethylamine	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
N-Nitrosodiphenylamine	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
Naphthalene	ND	66.7		g/Kg	1	11/9/2004 4:52:00 PM
Nitrobenzene	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
Pentachlorophenol	ND	333	μ	g/Kg	1	11/9/2004 4:52:00 PM
Phenanthrene	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
Phenol	ND	133	μį	g/Kg	1	11/9/2004 4:52:00 PM
Pyrene	ND	66.7	μ	g/Kg	1	11/9/2004 4:52:00 PM
Surr: 2,4,6-Tribromophenol	51.9	57.8-119	S %	6REC	1	11/9/2004 4:52:00 PM

**Date:** 16-Nov-04

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Lab Order:	0411033			
SEMIVOLATILI	E ORGANICS BY GC/MS		SW8270D			Analyst: bda
Surr: 2-Flu	orobiphenyl	63.0	52.6-93.2	%REC	1	11/9/2004 4:52:00 PM
Surr: 2-Flue	orophenol	52.9	40.7-111	%REC	1	11/9/2004 4:52:00 PM
Surr: 4-Ter	phenyl-d14	62.9	49.8-118	%REC	1	11/9/2004 4:52:00 PM
Surr: Nitrot	penzene-d5	55.6	44.8-103	%REC	1	11/9/2004 4:52:00 PM
Surr: Pheno	ol-d6	64.2	47.5-117	%REC	1	11/9/2004 4:52:00 PM

**Date:** 16-Nov-04

CLIENT: Time Oil Co. Lab Order: 0411033

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0411033-03 **Collection Date:** 11/1/2004 4:15:00 PM

Client Sample ID: LW045D (27-28)				Matrix:	SOIL	004 4:15:00 PM
•						
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	ND	19.0	1	mg/Kg-dry	1	11/11/2004
Lube Oil	ND	63.2	ı	mg/Kg-dry	1	11/11/2004
Surr: o-Terphenyl	60.4	50-150	(	%REC	1	11/11/2004
NWTPH-GX		NWTPH-GX				Analyst: <b>tif</b>
Gasoline	ND	3.16	r	mg/Kg-dry	1	11/5/2004
Surr: 4-Bromofluorobenzene	108	50-150	C	%REC	1	11/5/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.59	r	mg/Kg	1	11/10/2004 6:50:31 PM
Chromium	14.4	0.397		mg/Kg	1	11/11/2004 5:20:48 PM
Copper	11.7	0.794	r	mg/Kg	1	11/10/2004 6:50:31 PM
Lead	ND	1.59	r	mg/Kg	1	11/11/2004 5:20:48 PM
Nickel	16.1	0.397	r	mg/Kg	1	11/11/2004 5:20:48 PM
Zinc	45.8	0.794	r	ng/Kg	1	11/10/2004 6:50:31 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	1	ıg/Kg	1	11/9/2004 5:22:00 PM
1,2-Dichlorobenzene	ND	66.7	ŀ	ıg/Kg	1	11/9/2004 5:22:00 PM
1,3-Dichlorobenzene	ND	66.7	ļ	ıg/Kg	1	11/9/2004 5:22:00 PM
1,4-Dichlorobenzene	ND	66.7	١	ıg/Kg	1	11/9/2004 5:22:00 PM
2,4,5-Trichlorophenol	ND	333	۲	ıg/Kg	1	11/9/2004 5:22:00 PM
2,4,6-Trichlorophenol	ND	333	۲	ıg/Kg	1	11/9/2004 5:22:00 PM
2,4-Dichlorophenol	ND	200	1	ıg/Kg	1.	11/9/2004 5:22:00 PM
2,4-Dimethylphenol	ND	200	۲	ıg/Kg	1	11/9/2004 5:22:00 PM
2,4-Dinitrophenol	ND	333	۲	ıg/Kg	1	11/9/2004 5:22:00 PM
2,4-Dinitrotoluene	ND	333	ļ.	ıg/Kg	1	11/9/2004 5:22:00 PM
2,6-Dinitrotoluene	ND	333	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
2-Chloronaphthalene	ND	66.7	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
2-Chlorophenol	ND	66.7	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
2-Methylnaphthalene	ND	66.7	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
2-Methylphenol	ND	133	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
2-Nitroaniline	ND	333	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
2-Nitrophenol	ND	333	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
3,3-Dichlorobenzidine	ND	333	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
3-&4-Methylphenol	ND	333	μ	ıg/Kg	1	11/9/2004 5:22:00 PM
3-Nitroaniline	ND	333	μ	ıg/Kg	1 .	11/9/2004 5:22:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μ	g/Kg	1	11/9/2004 5:22:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μ	g/Kg	1	11/9/2004 5:22:00 PM
4-Chloro-3-methylphenol	ND	133	μ	g/Kg	1	11/9/2004 5:22:00 PM
4-Chloroaniline	ND	200	u	g/Kg	1	11/9/2004 5:22:00 PM

**Date:** 16-Nov-04

CLIENT: Time Oil Co.					Lab Order:	0411033
Project: NW Terminal Additiona	l Well Insta	ıll Phase III				
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
4-Chlorophenyl phenyl ether	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
4-Nitroaniline	ND	333		μg/Kg	1	11/9/2004 5:22:00 PM
4-Nitrophenol	ND	333		μg/Kg	1	11/9/2004 5:22:00 PM
Acenaphthene	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Acenaphthylene	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Anthracene	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Benz(a)anthracene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Benzo(a)pyrene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Benzo(b)fluoranthene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Benzo(g,h,i)perylene	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Benzo(k)fluoranthene	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Benzoic Acid	ND	667		μg/Kg	1	11/9/2004 5:22:00 PM
Benzyl Alcohol	ND	333		µg/Kg	1	11/9/2004 5:22:00 PM
Bis(2-chloroethoxy)methane	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Bis(2-chloroethyl)ether	ND	133		μg/Kg	1	11/9/2004 5:22:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Butyl benzyl phthalate	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Carbazole	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Chrysene	ND	66.7		μg/Kg	1	11/9/2004 5:22:00 PM
Di-n-butyl phthalate	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Di-n-octyl phthalate	ND	66.7		μg/Kg μg/Kg	1	11/9/2004 5:22:00 PM
Dibenz(a,h)anthracene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Dibenzofuran	ND	66.7		μg/Kg μg/Kg	1	11/9/2004 5:22:00 PM
Diethyl phthalate	ND	66.7		µg/Kg µg/Kg	1	11/9/2004 5:22:00 PM
Dimethyl phthalate	ND	66.7		µg/Kg µg/Kg	1	11/9/2004 5:22:00 PM
Fluoranthene	ND	66.7		µg/Kg µg/Kg	1	11/9/2004 5:22:00 PM
Fluorene	ND	66.7		μg/Kg μg/Kg	1	11/9/2004 5:22:00 PM
Hexachlorobenzene	ND	66.7			1	11/9/2004 5:22:00 PM
Hexachlorobutadiene	. ND	133		μg/Kg	1	11/9/2004 5:22:00 PM
Hexachlorocyclopentadiene	ND ND	333		µg/Kg		
Hexachloroethane				μg/Kg	1	11/9/2004 5:22:00 PM
	ND	133		μg/Kg	1	11/9/2004 5:22:00 PM
Indeno(1,2,3-cd)pyrene	ND ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Isophorone		66.7		µg/Kg	1	11/9/2004 5:22:00 PM
N-Nitrosodi-n-propylamine	ND	133		µg/Kg	1	11/9/2004 5:22:00 PM
N-Nitrosodimethylamine	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
N-Nitrosodiphenylamine	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Naphthalene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Nitrobenzene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Pentachlorophenol	ND	333		µg/Kg	1	11/9/2004 5:22:00 PM
Phenanthrene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Phenol -	ND	133		µg/Kg	1	11/9/2004 5:22:00 PM
Pyrene	ND	66.7		µg/Kg	1	11/9/2004 5:22:00 PM
Surr: 2,4,6-Tribromophenol	44.9	57.8-119	S	%REC	1	11/9/2004 5:22:00 PM

Date: 16-Nov-04

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Lab Order:	0411033			
SEMIVOLATILI	E ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
Surr: 2-Flu	orobiphenyl	53.5	52.6-93.2	%REC	1	11/9/2004 5:22:00 PM
Surr: 2-Fluo	orophenol	48.1	40.7-111	%REC	1	11/9/2004 5:22:00 PM
Surr: 4-Ter	phenyl-d14	58.2	49.8-118	%REC	1	11/9/2004 5:22:00 PM
Surr: Nitrob	penzene-d5	48.5	44.8-103	%REC	1	11/9/2004 5:22:00 PM
Surr: Pheno	ol-d6	56.8	47.5-117	%REC	1	11/9/2004 5:22:00 PM

Date: 16-Nov-04

CLIENT: Time Oil Co. Lab Order: 0411033

NW Terminal Additional Well Install Phase III Project:

0411033-04 Lab ID: Collection Date: 11/2/2004 10:20:00 AM

<b>Lab ID:</b> 0411033-04			Collection Date:	11/2/20	004 10:20:00 AM
Client Sample ID: LW036D (7-8)			Matrix:	SOIL	
Analyses	Result	Limit (	Qual Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>
Diesel	ND	18.8	mg/Kg-dry	1	11/11/2004
Lube Oil	ND	62.5	mg/Kg-dry	1	11/11/2004
Surr: o-Terphenyl	76.3	50-150	%REC	1	11/11/2004
NWTPH-GX		NWTPH-GX			Analyst: tlf
Gasoline	ND	3.12	mg/Kg-dry	1	11/5/2004
Surr: 4-Bromofluorobenzene	106	50-150	%REC	1	11/5/2004
TOTAL METALS BY ICP		E6010			Analyst: <b>skc</b>
Arsenic	ND	1.75	mg/Kg	1	11/10/2004 6:55:50 PM
Chromium	13.5	0.439	mg/Kg	1	11/11/2004 5:26:07 PM
Copper	11.3	0.877	mg/Kg	1	11/10/2004 6:55:50 PM
Lead	ND	1.75	mg/Kg	1	11/11/2004 5:26:07 PM
Nickel	13.4	0.439	mg/Kg	1	11/11/2004 5:26:07 PM
Zinc	46.7	0.877	mg/Kg	1	11/10/2004 6:55:50 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/9/2004 5:53:00 PM
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/9/2004 5:53:00 PM
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
2-Chlorophenol	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
2-Methylphenol	ND	133	μg/Kg	1	11/9/2004 5:53:00 PM
2-Nitroaniline	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
2-Nitrophenol	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
3-&4-Methylphenol	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
3-Nitroaniline	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/9/2004 5:53:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/9/2004 5:53:00 PM
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/9/2004 5:53:00 PM
4-Chloroaniline	ND	200	μg/Kg	1	11/9/2004 5:53:00 PM

**Date:** 16-Nov-04

CLIENT:	Time Oil Co.  NW Terminal Additiona	l Wall Inst	all Dhaga III			Lab Order:	0411033
Project:	NW Terminal Additiona	i wen msta	iii Filase III				
	RGANICS BY GC/MS		SW8270D				Analyst: <b>bd</b> a
4-Chlorophenyl ph	enyl ether	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
4-Nitroaniline		ND	333		μg/Kg	1 -	11/9/2004 5:53:00 PM
4-Nitrophenol		ND	333		μg/Kg	1	11/9/2004 5:53:00 PM
Acenaphthene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Acenaphthylene		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Anthracene		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Benz(a)anthracen	е	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Benzo(a)pyrene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Benzo(b)fluoranth	ene	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Benzo(g,h,i)peryle	ne	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Benzo(k)fluoranthe	ene	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Benzoic Acid		ND	667		µg/Kg	. 1	11/9/2004 5:53:00 PM
Benzyl Alcohol		ND	333		µg/Kg	1	11/9/2004 5:53:00 PM
Bis(2-chloroethoxy	)methane	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Bis(2-chloroethyl)e	ether	ND	133		μg/Kg	1	11/9/2004 5:53:00 PM
Bis(2-chloroisopro	pyl)ether	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Bis(2-ethylhexyl)ph	nthalate	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Butyl benzyl phtha	late	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Carbazole		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Chrysene		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Di-n-butyl phthalate	)	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Di-n-octyl phthalate	;	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Dibenz(a,h)anthrac	cene	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Dibenzofuran		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Diethyl phthalate		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Dimethyl phthalate		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Fluoranthene		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Fluorene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Hexachlorobenzen	e	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Hexachlorobutadie	ne	ND	133		μg/Kg	1	11/9/2004 5:53:00 PM
Hexachlorocyclope	ntadiene	ND	333		µg/Kg	1	11/9/2004 5:53:00 PM
Hexachloroethane		ND	133		μg/Kg	1	11/9/2004 5:53:00 PM
Indeno(1,2,3-cd)py	rene	ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Isophorone		ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
N-Nitrosodi-n-propy	lamine	ND	133		µg/Kg	1	11/9/2004 5:53:00 PM
N-Nitrosodimethylar	mine	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
N-Nitrosodiphenyla	mine	ND	66.7		µg/Kg	1	11/9/2004 5:53:00 PM
Naphthalene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Nitrobenzene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Pentachlorophenol		ND	333		μg/Kg	1	11/9/2004 5:53:00 PM
Phenanthrene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Phenol		ND	133		μg/Kg	1	11/9/2004 5:53:00 PM
Pyrene		ND	66.7		μg/Kg	1	11/9/2004 5:53:00 PM
Surr: 2,4,6-Tribro	omophenol	51.3	57.8-119	S	%REC	1	11/9/2004 5:53:00 PM

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Well Insta	ll Phase III	Lab Order Phase III		0411033
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
Surr: 2-Fluc	probiphenyl	54.3	52.6-93.2	%REC	1	11/9/2004 5:53:00 PM
Surr: 2-Fluo	prophenol	53.2	40.7-111	%REC	1	11/9/2004 5:53:00 PM
Surr: 4-Terp	ohenyl-d14	61.2	49.8-118	%REC	1	11/9/2004 5:53:00 PM
Surr: Nitrob	enzene-d5	48.1	44.8-103	%REC	1	11/9/2004 5:53:00 PM
Surr: Pheno	ol-d6	60.0	47.5-117	%REC	1	11/9/2004 5:53:00 PM

**Date:** 16-Nov-04

CLIENT: Time Oil Co. Lab Order: 0411033

Project: NW Terminal Additional Well Install Phase III

**Lab ID:** 0411033-05 **Collection Date:** 11/2/2004 1:25:00 PM

Lab ID: 0411033-05			Conection	Date: 11/2/20	04 1:25:00 PM
Client Sample ID: LW037D(6-7)			M	latrix: SOIL	
Analyses	Result	Limit	Qual Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX			Analyst: <b>tlf</b>
Diesel	ND	19.1	mg/Kg-dry	/ 1	11/11/2004
Lube Oil	ND	63.6	mg/Kg-dry	/ 1	11/11/2004
Surr: o-Terphenyl	64.1	50-150	%REC	1	11/11/2004
NWTPH-GX		NWTPH-GX			Analyst: tlf
Gasoline	ND	3.18	mg/Kg-dry	/ 1	11/5/2004
Surr: 4-Bromofluorobenzene	105	50-150	%REC	1	11/5/2004
TOTAL METALS BY ICP		E6010			Analyst: <b>skc</b>
Arsenic	ND	1.59	mg/Kg	1	11/10/2004 7:01:09 PM
Chromium	11.9	0.397	mg/Kg	1	11/11/2004 5:31:25 PM
Copper	10.4	0.794	mg/Kg	1	11/10/2004 7:01:09 PM
Lead	ND	1.59	mg/Kg	1	11/11/2004 5:31:25 PM
Nickel	12.1	0.397	mg/Kg	1	11/11/2004 5:31:25 PM
Zinc	45.2	0.794	mg/Kg	1	11/10/2004 7:01:09 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
1,2-Dichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
1,3-Dichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
1,4-Dichlorobenzene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
2,4,5-Trichlorophenol	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
2,4,6-Trichlorophenol	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
2,4-Dichlorophenol	ND	200	μg/Kg	1	11/9/2004 6:23:00 PM
2,4-Dimethylphenol	ND	200	μg/Kg	1	11/9/2004 6:23:00 PM
2,4-Dinitrophenol	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
2,4-Dinitrotoluene	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
2,6-Dinitrotoluene	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
2-Chloronaphthalene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
2-Chlorophenol	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
2-Methylnaphthalene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
2-Methylphenol	ND	133	μg/Kg	1	11/9/2004 6:23:00 PM
2-Nitroaniline	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
2-Nitrophenol	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
3,3-Dichlorobenzidine	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
3-&4-Methylphenol	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
3-Nitroaniline	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
4,6-Dinitro-2-methylphenol	ND	333	μg/Kg	1	11/9/2004 6:23:00 PM
4-Bromophenyl phenyl ether	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
4-Chloro-3-methylphenol	ND	133	μg/Kg	1	11/9/2004 6:23:00 PM
4-Chloroaniline	ND	200	μg/Kg	1	11/9/2004 6:23:00 PM

CLIENT: Time Oil Co.				Lab Order:	0411033
Project: NW Terminal Additiona	l Well Insta	all Phase III			
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D			Analyst: <b>bd</b>
4-Chlorophenyl phenyl ether	ND	66.7	μg/Kg	g 1	11/9/2004 6:23:00 PM
4-Nitroaniline	ND	333	μg/Kg	g 1	11/9/2004 6:23:00 PN
4-Nitrophenol	ND	333	μg/Kg	<b>j</b> 1	11/9/2004 6:23:00 PM
Acenaphthene	ND	66.7	μg/Kg	<b>j</b> 1	11/9/2004 6:23:00 PM
Acenaphthylene	ND	66.7	μg/Kg	<b>j</b> 1	11/9/2004 6:23:00 PM
Anthracene	ND	66.7	μg/Kg	j 1	11/9/2004 6:23:00 PM
Benz(a)anthracene	ND	66.7	μg/Kg	<b>j</b> 1	11/9/2004 6:23:00 PM
Benzo(a)pyrene	ND	66.7	μg/Kg	<b>1</b>	11/9/2004 6:23:00 PM
Benzo(b)fluoranthene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Benzo(g,h,i)perylene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Benzo(k)fluoranthene	ND	66.7	μg/Kg	1	11/9/2004 6:23:00 PM
Benzoic Acid	ND	667	μg/Kg		11/9/2004 6:23:00 PM
Benzyl Alcohol	ND	333	μg/Kg		11/9/2004 6:23:00 PM
Bis(2-chloroethoxy)methane	ND	66.7	μg/Kg	•	11/9/2004 6:23:00 PM
Bis(2-chloroethyl)ether	ND	133	μg/Kg		11/9/2004 6:23:00 PM
Bis(2-chloroisopropyl)ether	ND	66.7	μg/Kg	•	11/9/2004 6:23:00 PM
Bis(2-ethylhexyl)phthalate	ND	66.7	μg/Kg	•	11/9/2004 6:23:00 PM
Butyl benzyl phthalate	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Carbazole	ND	66.7	μg/Kg	•	11/9/2004 6:23:00 PM
Chrysene	ND	66.7	μg/Kg	•	11/9/2004 6:23:00 PM
Di-n-butyl phthalate	ND	66.7	µg/Kg		11/9/2004 6:23:00 PM
Di-n-octyl phthalate	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Dibenz(a,h)anthracene	ND	66.7	µg/Kg	•	11/9/2004 6:23:00 PM
Dibenzofuran	ND	66.7	μg/Kg	•	11/9/2004 6:23:00 PM
Diethyl phthalate	ND	66.7	µg/Kg		11/9/2004 6:23:00 PM
Dimethyl phthalate	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Fluoranthene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Fluorene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Hexachlorobenzene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Hexachlorobutadiene	ND	133	μg/Kg		11/9/2004 6:23:00 PM
Hexachlorocyclopentadiene	ND	333	µg/Kg		11/9/2004 6:23:00 PM
Hexachloroethane	ND	133	μg/Kg		11/9/2004 6:23:00 PM
Indeno(1,2,3-cd)pyrene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Isophorone	ND	66.7	μg/Kg μg/Kg		11/9/2004 6:23:00 PM
N-Nitrosodi-n-propylamine	ND	133	μg/Kg		11/9/2004 6:23:00 PM
N-Nitrosodi-n-propyramine N-Nitrosodimethylamine	ND	66.7			11/9/2004 6:23:00 PM
N-Nitrosodimetrylamine N-Nitrosodiphenylamine	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
		66.7	μg/Kg		
Naphthalene Nitrobenzene	ND ND	66.7	µg/Kg		11/9/2004 6:23:00 PM 11/9/2004 6:23:00 PM
			μg/Kg		
Pentachlorophenol	ND	333	μg/Kg		11/9/2004 6:23:00 PM
Phenanthrene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Phenol	ND	133	μg/Kg		11/9/2004 6:23:00 PM
Pyrene	ND	66.7	μg/Kg		11/9/2004 6:23:00 PM
Surr: 2,4,6-Tribromophenol	42.9	57.8-119	S %REC	1	11/9/2004 6:23:00 PM

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Well Insta	ill Phase III		Lab Order:	0411033
SEMIVOLATILI	E ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
Surr: 2-Fluo	orobiphenyl	66.6	52.6-93.2	%REC	1	11/9/2004 6:23:00 PM
Surr: 2-Fluo	orophenol	58.0	40.7-111	%REC	1	11/9/2004 6:23:00 PM
Surr: 4-Ter	phenyl-d14	61.5	49.8-118	%REC	1	11/9/2004 6:23:00 PM
Surr: Nitrob	penzene-d5	59.6	44.8-103	%REC	1	11/9/2004 6:23:00 PM
Surr: Pheno	ol-d6	64.4	47.5-117	%REC	1	11/9/2004 6:23:00 PM

2.6-Dinitrotoluene

2-Chlorophenol

2-Methylphenol

2-Nitroaniline

2-Nitrophenol

3-Nitroaniline

4-Chloroaniline

2-Chloronaphthalene

2-Methylnaphthalene

3,3-Dichlorobenzidine

4,6-Dinitro-2-methylphenol

4-Chloro-3-methylphenol

4-Bromophenyl phenyl ether

3-&4-Methylphenol

Date: 16-Nov-04

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CLIENT: Time Oil Co. Lab Order: 0411033 Project: NW Terminal Additional Well Install Phase III Lab ID: 0411033-06 Collection Date: 11/2/2004 3:00:00 PM Client Sample ID: LW038D (7-8) Matrix: SOIL DF Analyses Result Limit Qual Units **Date Analyzed** NWTPH-DX **NWTPH-DX** Analyst: tlf Diesel ND 19.5 mg/Kg-dry 1 11/11/2004 Lube Oil ND 64.9 mg/Kg-dry 11/11/2004 1 Surr: o-Terphenyl 76.1 50-150 %REC 11/11/2004 **NWTPH-GX NWTPH-GX** Analyst: tlf ND Gasoline 3.24 mg/Kg-dry 1 11/5/2004 Surr: 4-Bromofluorobenzene 105 50-150 %REC 11/5/2004 TOTAL METALS BY ICP E6010 Analyst: skc ND Arsenic 1.69 mg/Kg 1 11/11/2004 5:36:43 PM Chromium 14.7 0.424 mg/Kg 1 11/11/2004 5:36:43 PM 10.2 Copper 0.847 mg/Kg 11/10/2004 7:22:46 PM Lead ND 1.69 mg/Kg 1 11/11/2004 5:36:43 PM Nickel 13.4 0.424 mg/Kg 1 11/11/2004 5:36:43 PM Zinc 40.1 0.847 mg/Kg 1 11/11/2004 5:36:43 PM SEMIVOLATILE ORGANICS BY GC/MS SW8270D Analyst: bda 1,2,4-Trichlorobenzene ND 66.7 µg/Kg 1 11/11/2004 1:47:00 PM ND 66.7 1.2-Dichlorobenzene μg/Kg 1 11/11/2004 1:47:00 PM ND 66.7 1.3-Dichlorobenzene µg/Kg 1 11/11/2004 1:47:00 PM 1,4-Dichlorobenzene ND 66.7 µg/Kg 1 11/11/2004 1:47:00 PM ND 2,4,5-Trichlorophenol 333 μg/Kg 1 11/11/2004 1:47:00 PM ND 2,4,6-Trichlorophenol 333 1 µg/Kg 11/11/2004 1:47:00 PM ND 200 2,4-Dichlorophenol 1 11/11/2004 1:47:00 PM µg/Kg 2,4-Dimethylphenol ND 200 µg/Kg 1 11/11/2004 1:47:00 PM 2,4-Dinitrophenol ND 333 μg/Kg 1 11/11/2004 1:47:00 PM 2.4-Dinitrotoluene ND 333 μg/Kg 1 11/11/2004 1:47:00 PM

333

66.7

66.7

66.7

133

333

333

333

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333

333

66.7

133

200

µg/Kg

µg/Kg

µg/Kg

μg/Kg

µg/Kg

μg/Kg

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11/11/2004 1:47:00 PM

	Time Oil Co.					Lab Order:	0411033
Project:	NW Terminal Additiona	l Well Insta	ill Phase III				
SEMIVOLATILE OR	GANICS BY GC/MS		SW8270D				Analyst: <b>bd</b> a
4-Chlorophenyl phe	nyl ether	ND	66.7		µg/Kg	1	11/11/2004 1:47:00 PM
4-Nitroaniline		ND	333		μg/Kg	1	11/11/2004 1:47:00 PM
4-Nitrophenol		ND	333		μg/Kg	1	11/11/2004 1:47:00 PM
Acenaphthene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Acenaphthylene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Anthracene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Benz(a)anthracene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Benzo(a)pyrene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Benzo(b)fluoranthe	ne	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Benzo(g,h,i)perylen	е	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PN
Benzo(k)fluoranthei	ne	ND	66,7		μg/Kg	1	11/11/2004 1:47:00 PN
Benzoic Acid		ND	667		μg/Kg	1	11/11/2004 1:47:00 PM
Benzyl Alcohol		ND	333		µg/Kg	1	11/11/2004 1:47:00 PN
Bis(2-chloroethoxy)	methane	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Bis(2-chloroethyl)et	her	ND	133		μg/Kg	1	11/11/2004 1:47:00 PM
Bis(2-chloroisoprop	yl)ether	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Bis(2-ethylhexyl)phi	thalate	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PN
Butyl benzyl phthala	ate	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Carbazole		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Chrysene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Di-n-butyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Di-n-octyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Dibenz(a,h)anthrace	ene	ND	66.7		µg/Kg	1	11/11/2004 1:47:00 PM
Dibenzofuran		ND	66.7		µg/Kg	1	11/11/2004 1:47:00 PM
Diethyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Dimethyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Fluoranthene		ND	66.7		µg/Kg	1	11/11/2004 1:47:00 PM
Fluorene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Hexachlorobenzene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Hexachlorobutadien	е	ND	133		μg/Kg	1	11/11/2004 1:47:00 PM
Hexachlorocycloper	tadiene	ND	333		μg/Kg	1	11/11/2004 1:47:00 PM
Hexachloroethane		ND	133		μg/Kg	1	11/11/2004 1:47:00 PM
Indeno(1,2,3-cd)pyr	ene	ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Isophorone		ND	66.7		µg/Kg	1	11/11/2004 1:47:00 PM
N-Nitrosodi-n-propyl	amine	ND	133		μg/Kg	1	11/11/2004 1:47:00 PM
N-Nitrosodimethylam		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
N-Nitrosodiphenylam		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Naphthalene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Nitrobenzene		ND	66.7		μg/Kg	1	11/11/2004 1:47:00 PM
Pentachlorophenol		ND	333		μg/Kg μg/Kg	1	11/11/2004 1:47:00 PM
Phenanthrene		ND	66.7		μg/Kg μg/Kg	1	11/11/2004 1:47:00 PM
Phenol		ND	133		μg/Kg μg/Kg	1	11/11/2004 1:47:00 PM
Pyrene		ND	66.7		μg/Kg μg/Kg	1	11/11/2004 1:47:00 PM
Surr: 2,4,6-Tribror	manhanal	51.7	57.8-119	S	%REC	1	11/11/2004 1:47:00 PM

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Well Insta	Lab Order:	0411033		
SEMIVOLATILE	ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
Surr: 2-Fluore	obiphenyl	59.0	52.6-93.2	%REC	1	11/11/2004 1:47:00 PM
Surr: 2-Fluoro	ophenol	53.3	40.7-111	%REC	1	11/11/2004 1:47:00 PM
Surr: 4-Terph	enyl-d14	65.5	49.8-118	%REC	1	11/11/2004 1:47:00 PM
Surr: Nitrober	nzene-d5	53.6	44.8-103	%REC	. 1	11/11/2004 1:47:00 PM
Surr: Phenol-	d6	57.5	47.5-117	%REC	1	11/11/2004 1:47:00 PM

Date: 16-Nov-04

CLIENT:

Time Oil Co.

Lab Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

Lab ID:

0411033-07

**Collection Date:** 11/3/2004 10:00:00 AM

Client Sample ID: LW039D (5-6)				Matrix:	SOIL	
Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: <b>tlf</b>
Diesel	ND	20.2	А3	mg/Kg-dry	1	11/11/2004
Lube Oil	155	67.3	710	mg/Kg-dry	1	11/11/2004
Surr: o-Terphenyl	92.6	50-150		%REC	1	11/11/2004
NWTPH-GX		NWTPH-GX				Analyst: <b>tif</b>
Gasoline	ND	3.36		mg/Kg-dry	1	11/5/2004
Surr: 4-Bromofluorobenzene	106	50-150		%REC	1	11/5/2004
TOTAL METALS BY ICP		E6010				Analyst: <b>skc</b>
Arsenic	ND	1.52		mg/Kg	1	11/11/2004 5:42:03 PM
Chromium	11.8	0.379		mg/Kg	1	11/11/2004 5:42:03 PM
Copper	9.97	0.758		mg/Kg	1	11/10/2004 7:28:04 PM
Lead	ND	1.52		mg/Kg	1	11/11/2004 5:42:03 PM
Nickel	14.4	0.379		mg/Kg	1	11/11/2004 5:42:03 PM
Zinc	41.2	0.758		mg/Kg	1	11/11/2004 5:42:03 PM
SEMIVOLATILE ORGANICS BY GC/MS		SW8270D				Analyst: <b>bda</b>
1,2,4-Trichlorobenzene	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
1,2-Dichlorobenzene	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
1,3-Dichlorobenzene	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
1,4-Dichlorobenzene	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
2,4,5-Trichlorophenol	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
2,4,6-Trichlorophenol	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
2,4-Dichlorophenol	ND	200		μg/Kg	1	11/11/2004 2:17:00 PM
2,4-Dimethylphenol	ND	200		μg/Kg	1	11/11/2004 2:17:00 PM
2,4-Dinitrophenol	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
2,4-Dinitrotoluene	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
2,6-Dinitrotoluene	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
2-Chloronaphthalene	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
2-Chlorophenol	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
2-Methylnaphthalene	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
2-Methylphenol	ND	133		μg/Kg	1	11/11/2004 2:17:00 PM
2-Nitroaniline	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
2-Nitrophenol	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
3,3-Dichlorobenzidine	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
3-&4-Methylphenol	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
3-Nitroaniline	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
4,6-Dinitro-2-methylphenol	ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
4-Bromophenyl phenyl ether	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
4-Chloro-3-methylphenol	ND	133		μg/Kg	1	11/11/2004 2:17:00 PM
4-Chloroaniline	ND	200		μg/Kg	1	11/11/2004 2:17:00 PM

CLIENT:	Time Oil Co.					Lab Order:	0411033
Project:	NW Terminal Additiona	l Well Insta	ll Phase III		_		
SEMIVOLATILE OF	RGANICS BY GC/MS		SW8270D			,	Analyst: <b>bda</b>
4-Chlorophenyl phe		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
4-Nitroaniline		ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
4-Nitrophenol		ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
Acenaphthene		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Acenaphthylene		112	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Anthracene		355	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Benz(a)anthracene	<del>)</del>	668	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Benzo(a)pyrene		585	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Benzo(b)fluoranthe	ene	517	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Benzo(g,h,i)perylei		157	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Benzo(k)fluoranthe		187	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Benzoic Acid	··-	ND	667		μg/Kg	1	11/11/2004 2:17:00 PM
Benzyl Alcohol		ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
Bis(2-chloroethoxy	)methane	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Bis(2-chloroethyl)e		ND	133		μg/Kg	1	11/11/2004 2:17:00 PM
Bis(2-chloroisoprop		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Bis(2-ethylhexyl)ph	• •	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Butyl benzyl phthal		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Carbazole	ato	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Chrysene		655	66.7		μg/Kg μg/Kg	1	11/11/2004 2:17:00 PM
Di-n-butyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Di-n-octyl phthalate		ND	66.7		μg/Kg μg/Kg	1	11/11/2004 2:17:00 PM
Dibenz(a,h)anthrac		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Dibenzofuran	Cito	ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Diethyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Dimethyl phthalate		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Fluoranthene		775	66.7		μg/Kg μg/Kg	1	11/11/2004 2:17:00 PM
Fluorene		ND	66.7		μg/Kg μg/Kg	1	11/11/2004 2:17:00 PM
Hexachlorobenzene	2	ND	66.7		μg/Kg μg/Kg	1	11/11/2004 2:17:00 PM
Hexachlorobutadier		ND	133			1	11/11/2004 2:17:00 PM
Hexachlorocyclope		ND	333		μg/Kg	1	
Hexachloroethane	madiene	ND	133		μg/Kg	1	11/11/2004 2:17:00 PM 11/11/2004 2:17:00 PM
	rono	160	66.7		μg/Kg		11/11/2004 2:17:00 PM
Indeno(1,2,3-cd)pyr	ene	ND	66.7		μg/Kg	1	,,
•	lamino		133		µg/Kg	1 1	11/11/2004 2:17:00 PM
N-Nitrosodi-n-propy		ND			μg/Kg	,	11/11/2004 2:17:00 PM
N-Nitrosodimethylan N-Nitrosodiphenylar		ND ND	66.7 66.7		µg/Kg	1	11/11/2004 2:17:00 PM
, ,	IMIC				µg/Kg	1	11/11/2004 2:17:00 PM
Naphthalene		ND	66.7		μg/Kg	1	11/11/2004 2:17:00 PM
Nitrobenzene		ND	66.7		µg/Kg	1	11/11/2004 2:17:00 PM
Pentachlorophenol		ND	333		μg/Kg	1	11/11/2004 2:17:00 PM
Phenanthrene		674	66.7		µg/Kg	1	11/11/2004 2:17:00 PM
Phenol		ND	133		µg/Kg	1	11/11/2004 2:17:00 PM
Pyrene		1090	66.7	_	μg/Kg	1	11/11/2004 2:17:00 PM
Surr: 2,4,6-Tribro	mophenol	43.4	57.8-119	S	%REC	1	11/11/2004 2:17:00 PM

CLIENT: Project:	Time Oil Co. NW Terminal Additional	Well Insta		Lab Order:	0411033	
SEMIVOLATIL	E ORGANICS BY GC/MS		SW8270D			Analyst: <b>bda</b>
Surr: 2-Flu	orobiphenyl	73.1	52.6-93.2	%REC	1	11/11/2004 2:17:00 PM
Surr: 2-Flu	orophenol	56.5	40.7-111	%REC	1	11/11/2004 2:17:00 PM
Surr: 4-Ter	rphenyl-d14	73.3	49.8-118	%REC	1	11/11/2004 2:17:00 PM
Surr: Nitrol	benzene-d5	57.5	44.8-103	%REC	1	11/11/2004 2:17:00 PM
Surr: Phen	ol-d6	68.3	47.5-117	%REC	1	11/11/2004 2:17:00 PM

CLIENT:

Project:

Time Oil Co.

WorkOrder:

0411033

NW Terminal Additional Well Install Phase III

Date: 16-Nov-04

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID	MBLK	SampType:	MBLK	TestCod	e: <b>6010_S</b>	Units: mg/Kg		Prep Date	: 11/5/2	004	Run ID:	TJAIRIS_041	110B
Client ID:	ZZZZZ	Batch ID:	12212	TestN	o: <b>E6010</b>			AnalysisDate	e: 11/10/	2004	SeqNo:	291619	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	) RPDLimit	Qual
Arsenic			ND	2.00									
Chromium			ND	0.500									
Copper			ND	1.00									
Lead			ND	2.00									
Nickel			ND	0.500									
Zinc			0.64	1.00									J
Sample ID	LCS	SampType:	LCS	TestCode	e: <b>6010_S</b>	Units: mg/Kg		Prep Date:	11/5/20	004	Run ID:	TJAIRIS_0411	110B
Client ID:	ZZZZZ	Batch ID:	12212	TestNo	o: <b>E6010</b>			Analysis Date	: 11/10/2	2004	SeqNo: 2	291620	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPC	RPDLimit	Qual
Arsenic			104.6	2.00	100	0	105	85.1	107	0		0	
Chromium			25.08	0.500	25	0	100	84	113	0		0	
Copper			51.03	1.00	50	0	102	91.3	111	0		0	
Lead			99.29	2.00	100	0	99.3	84.9	109	0		0	
Nickel			26.1	0.500	25	0	104	85.5	112	0		0	
Zinc	· · · · · · · · · · · · · · · · · · ·		53.08	1.00	50	0.64	105	86.8	112	0		0	
Sample ID	0411026-01BMS	SampType:	MS	TestCode	e: 6010_S	Units: mg/Kg		Prep Date:	11/5/20	004	Run ID: 1	JAIRIS_0411	10B
Client ID:	ZZZZZ	Batch ID:	12212	TestNo	e: <b>E6010</b>			Analysis Date	: 11/10/2	2004	SeqNo: 2	91623	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			84.5	1.67	83.33	0	101	86.1	109	0		)	
Copper			60.34	0.833	41.67	24.67	85.6	75.1	126	0	(	)	
Zinc			92.67	0.833	41.67	46.61	111	86.2	113	0		)	

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

	0411026-01BMS	SampType:			de: <b>6010_S</b>	Units: mg/Kg		·	e: <b>11/5/2</b>			JAIRIS_0411	I11A
Client ID:	ZZZZZ	Batch ID:	12212	TestN	lo: <b>E6010</b>			AnalysisDat	te: 11/11/	2004	SeqNo: 29	2056	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium			30.72	0.417	20.83	16.69	67.3	75	121	0	0		S,RP
Lead			78.6	1.67	83.33	0	94.3	92.1	104	0	0		
Nickel			30.85	0.417	20.83	19	56.9	89.3	105	0	0		S,RP
Sample ID	0411026-01BMSD	SampType:	MSD	TestCod	le: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: <b>11/5/2</b>	004	Run ID: T	IAIRIS_0411	10B
Client ID:	ZZZZZ	Batch ID:	12212	TestN	lo: <b>E6010</b>			AnalysisDat	e: 11/10/	2004	SeqNo: 29	1625	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			83.23	1.61	80.65	0	103	86.1	109	84.5	1.52	20	
Copper			62.01	0.806	40.32	24.67	92.6	75.1	126	60.34	2.72	20	
Zinc			94.35	0.806	40.32	46.61	118	86.2	113	92.67	1.81	20	S
Sample ID	0411026-01BMSD	SampType:	MSD	TestCod	e: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: <b>11/5/2</b> 0	004	Run ID: TJ	AIRIS_0411	11A
Client ID:	ZZZZZ	Batch ID:	12212	TestN	o: <b>E6010</b>			Analysis Dat	e: <b>11/11/</b> 2	2004	SeqNo: 29	2057	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium			34.44	0.403	20.16	16.69	88	75	121	30.72	11.4	20	
Lead			79.73	1.61	80.65	0	98.9	92.1	104	78.6	1.43	20	
Nickel			37.08	0.403	20.16	19	89.7	89.3	105	30.85	18.3	20	***
Sample ID	0411026-01BDUP	SampType:	DUP	TestCod	e: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: 11/5/20	004	Run ID: TJ	AIRIS_0411	10B
Client ID:	ZZZZZ	Batch ID:	12212	TestN	o: <b>E6010</b>			Analysis Dat	e: <b>11/10/</b> 2	2004	SeqNo: <b>29</b>	1622	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.47	0	0	0	0	0	0	0	20	
Chromium			11.58	0.368	0	0	0	0	0	17.02	38.1	20	R
Copper			23.18	0.735	- 0	. 0	0	0	0	24.67	6.21	20	
Lead			ND	1.47	0	0	0	0	0	0	0	20	
Loud						_			•	40.77			
Nickel			16.65	0.368	0	0	0	0	0	19.77	17.1	20	

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Page 2 of 18

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID Client ID:	CCV ZZZZZ	SampType: Batch ID:			de: <b>6010_S</b> No: <b>E6010</b>	Units: mg/Kg	,					Run ID: <b>TJAIRIS_041110B</b> SeqNo: <b>291624</b>		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Arsenic			104.1	2.00	100	0	104	90	110	0	0			
Chromium			25.58	0.500	25	0	102	90	110	0	0			
Copper			48.82	1.00	50	0	97.6	90	110	0	0			
Lead			100.7	2.00	100	0	101	90	110	0	0			
Nickel			26.65	0.500	25	0	107	90	110	0	0			
Zinc			51.69	1.00	50	0	103	90	110	0	0			
Sample ID	CCV	SampType:	CCV	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: 11/5/20	004	Run ID: TJ	AIRIS_041	110B	
Client ID:	ZZZZZ	Batch ID:	12212	Test!	No: <b>E6010</b>			AnalysisDa	te: <b>11/10/</b> 2	2004	SeqNo: 29	1635		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Arsenic			109.9	2.00	100	0	110	90	110	0	0	•		
Calcium			2367	5.00	2500	0	94.7	90	110	0	0		В	
Copper			48.8	1.00	50	0	97.6	90	110	0	0			
Magnesiun	n		488.2	1.00	500	0	97.6	90	110	0	0		В	
Zinc			54.13	1.00	50	0	108	90	110	0	0			
Sample ID	CCV	SampType:	CCV	TestCod	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: <b>11/5/2</b> 0	004	Run ID: <b>TJ</b>	AIRIS_0411	110B	
Client ID:	ZZZZZ	Batch ID:	12212	TestN	No: <b>E6010</b>			Analysis Dat	te: 11/10/2	2004	SeqNo: 29	1645		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Copper			50.08	1.00	50	0	100	90	110	0	0			
Magnesium	1		501.8	1.00	500	0	100	90	110	0	0		В	
Sample ID	ccv	SampType:	CCV	TestCod	de: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: <b>11/5/2</b> 0	104	Run ID: TJ	AIRIS_0411	111A	
Client ID:	ZZZZZ	Batch ID:	12212	TestN	lo: <b>E6010</b>		,	Analysis Dat	e: <b>11/11/2</b>	2004	SeqNo: <b>29</b> 2	2063		
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Arsenic			99.03	2.00	100	0	99	90	110	0	0			
Calcium			2489	5.00	2500	0	99.6	90	110	0	0		В	
Chromium			26.29	0.500	25	0	105	90	110	0	0			

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

R - RPD outside accepted recovery limits

Page 3 of 18

J - Analyte detected below quantitation limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

Sample ID		SampType:			de: <b>6010_S</b>	Units: mg/Kg		•	te: 11/5/2			JAIRIS_041	111A
Client ID:	ZZZZZ	Batch ID:	12212	Testi	No: <b>E6010</b>			AnalysisDa	te: 11/11/	2004	SeqNo: 29	92063	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron			4920	2.00	5000	0	98.4	90	110	0	0		В
Lead			96.04	2.00	100	0	96	90	110	0	0		
Nickel			24.69	0.500	25	0	98.8	90	110	0	0		
Sodium			2393	10.0	2500	0	95.7	90	110	0	0		В
Zinc			50.31	1.00	50	0	101	90	110	0	0		
Sample ID	ccv	SampType:	CCV	TestCo	de: <b>6010_S</b>	Units: mg/Kg		Prep Dat	e: 11/5/20	004	Run ID: Tu	JAIRIS_041	111A
Client ID:	ZZZZZ	Batch ID:	12212	Test	No: <b>E6010</b>			AnalysisDa	te: 11/11/2	2004	SeqNo: 29	2074	
Analyte		_	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			101	2.00	100	0	101	90	110	0	0		
Calcium			2605	5.00	2500	0	104	90	110	0	0		В
Chromium			25.12	0.500	25	0	100	90	110	0	0		
Iron			5164	2.00	5000	0	103	90	110	0	0		В
Lead			100.5	2.00	100	0	101	90	110	0	0		
Nickel			25.58	0.500	25	0	102	90	110	0	0		
Sodium			2348	10.0	2500	0	93.9	90	110	0	0		В
Zinc			51.05	1.00	50	0	102	90	110	0	0		
Sample ID	CCV	SampType:	CCV	TestCod	de: <b>6010_S</b>	Units: mg/Kg		Prep Date	e: <b>11/5/2</b> 0	004	Run ID: TJ	AIRIS_0411	111A
Client ID:	ZZZZZ	Batch ID:	12212	TestN	No: <b>E6010</b>		,	AnalysisDat	te: 11/11/2	2004	SeqNo: 29	2078	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			107.4	2.00	100	0	107	90	110	0	0		-
Calcium			2455	5.00	2500	0	98.2	90	110	0	0		В
Chromium			26.24	0.500	25	0	105	90	110	0	0		
Iron			5138	2.00	5000	0	103	90	110	0	0		В
Lead			104.4	2.00	100	0	104	90	110	0	0		
Nickel			27.14	0.500	25	0	109	90	110	0	0		
Sodium			2329	10.0	2500	0	93.2	90	110	0	. 0		В
Zinc			53.21	1.00	50	0	106	90	110	0	0		

Oualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

Arsenic

Lead

Nickel

Zinc

Chromium

NW Terminal Additional Well Install Phase III

99.48

24.27

94.84

24.68

50.19

2.00

2.00

1.00

0.500

0.500

100

25

100

25

50

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_S

0

0

0

0

0

0

0

0

0

0

Sample ID ICV	SampType: ICV	TestCode	e: <b>6010_S</b>	Units: <b>mg/Kg</b>		Prep Date:	11/5/20	04	Run ID: TJ	AIRIS_0411	10B
Client ID: ZZZZZ	Batch ID: 12212	TestNo	o: <b>E6010</b>			AnalysisDate	: 11/10/20	004	SeqNo: 29	1618	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	101.4	2.00	100	0	101	90	110	0	0		
Chromium	24.45	0.500	25	0	97.8	90	110	0	0		
Copper	50.69	1.00	50	0	101	90	110	0	0		
Lead	99.29	2.00	100	0	99.3	90	110	0	0		
Nickel	25.46	0.500	25	0	102	90	110	0	0		
Zinc	51.17	1.00	50	0	102	90	110	0	0		
Sample ID <b>ICV</b>	SampType: <b>ICV</b>	TestCode	e: <b>6010_S</b>	Units: mg/Kg		Prep Date:	11/5/200	04	Run ID: TJ	AIRIS_0411	11A
Client ID: ZZZZZ	Batch ID: 12212	TestNo	o: <b>E6010</b>			Analysis Date:	11/11/20	004	SeqNo: <b>29</b> :	2048	
Analyte	Result	POI	SPK value	SPK Ref Val	%REC	LowLimit H	liahl imit	RPD Ref Val	%RPD	RPDI imit	Qual

0

0

0

0

0

99.5

97.1

94.8

98.7

100

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CLIENT:

Time Oil Co.

Work Order:

Project:

0411033

NW Terminal Additional Well Install Phase III

ANALYTICAL QC SUMMARY REPORT

Sample ID MB-12233	SampType: MBLK	TestCode: 8270LL_	S Units: µg/Kg		Prep Date: 11/9/2	004	Run ID: <b>59</b>	73G_041109	B
Client ID: ZZZZZ	Batch ID: 12233	TestNo: SW8270	D		Analysis Date: 11/9/2	004	SeqNo: 29	1406	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	66.7							
1,2-Dichlorobenzene	ND	66.7							
1,3-Dichlorobenzene	ND	66.7							
1,4-Dichlorobenzene	ND	66.7							
2,4,5-Trichlorophenol	ND	333							
2,4,6-Trichlorophenol	ND	333							
2,4-Dichlorophenol	ND	200							
2,4-Dimethylphenol	ND	200							
2,4-Dinitrophenol	ND	333							
2,4-Dinitrotoluene	ND	333							
2,6-Dinitrotoluene	ND	333						•	
2-Chloronaphthalene	ND	66.7	•						
2-Chlorophenol	ND	66.7							
2-Methylnaphthalene	ND	66.7							
2-Methylphenol	ND	133							
2-Nitroaniline	ND	333							
2-Nitrophenol	ND	333							
3,3-Dichlorobenzidine	ND	333							
3-&4-Methylphenol	ND	333							
3-Nitroaniline	ND	333							
4,6-Dinitro-2-methylphenol	ND	333							
4-Bromophenyl phenyl ether	ND	66.7							
4-Chloro-3-methylphenol	ND	133							
4-Chloroaniline	ND	200							
4-Chlorophenyl phenyl ether	ND	66.7							
4-Nitroaniline	ND	333							
4-Nitrophenol	ND	333							
Acenaphthene	ND	66.7							
Acenaphthylene	ND	66.7							
Anthracene	ND	66.7							
Benz(a)anthracene	ND	66.7							

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

Sample ID MB-12233	SampType: <b>MBLK</b>	TestCode: 8270LL_	S Units: µg/Kg		Prep Da	te: 11/9/2	004	Run ID: 59	73G_041109	9B
Client ID: ZZZZZ	Batch ID: 12233	TestNo: SW8270	D		AnalysisDa	ite: 11/9/2	004	SeqNo: 29	1406	
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(a)pyrene	ND	66.7								
Benzo(b)fluoranthene	ND	66.7								
Benzo(g,h,i)perylene	ND	66.7								
Benzo(k)fluoranthene	ND	66.7								
Benzoic Acid	ND	667								
Benzyl Alcohol	ND	333								
Bis(2-chloroethoxy)methane	ND	66.7								
Bis(2-chloroethyl)ether	ND	133								
Bis(2-chloroisopropyl)ether	ND	66.7								
Bis(2-ethylhexyl)phthalate	ND	66.7								
Butyl benzyl phthalate	ND	66.7								
Carbazole	ND	66.7								
Chrysene	ND	66.7								
Di-n-butyl phthalate	26.33	66.7								J
Di-n-octylphthalate	ND	66.7								
Dibenz(a,h)anthracene	ND	66.7								
Dibenzofuran	ND	66.7								
Diethylphthalate	ND	66.7								
Dimethyl phthalate	ND	66.7								
Fluoranthene	ND	66.7								
Fluorene	20	66.7								J
Hexachlorobenzene	ND	66.7								
Hexachlorobutadiene	ND	133								
Hexachlorocyclopentadiene	ND	333								
Hexachloroethane	ND	133								
Indeno(1,2,3-cd)pyrene	ND	66.7								
Isophorone	ND	66.7								
N-Nitrosodi-n-propylamine	ND	133								
N-Nitrosodimethylamine	ND	66.7								
N-Nitrosodiphenylamine	ND	66.7								
Naphthalene	ND	66.7								

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Project:

Time Oil Co.

Work Order:

0411033

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID MB-12233 Client ID: ZZZZZ	SampType: Batch ID:			e: 8270LL_S o: SW8270D	Units: µg/Kg		Prep Date Analysis Date			Run ID: 59	973G_04110 91406	9B
Analyte	Buomb,	Result	PQL		SPK Ref Val	%REC	,		RPD Ref Val	%RPD	RPDLimit	Qual
Nitrobenzene		8.667	66.7			•			_			J
Pentachlorophenol		ND	333									
Phenanthrene		ND	66.7									
Phenoi		ND	133									
Pyrene		ND	66.7									
Surr:2,4,6-Tribromophenol		2503	1.00	3333	0	75.1	57.8	119	0	0		
Surr: 2-Fluorobiphenyl		3337	1.00	3333	0	100	52.6	93.2	0	0		S
Surr: 2-Fluorophenol		3029	1.00	3333	0	90.9	40.7	111	0	0		
Surr:4-Terphenyl-d14		2854	1.00	3333	0	85.6	49.8	118	0	0		
Surr: Nitrobenzene-d5		2878	1.00	3333	0	86.3	44.8	103	0	0		
Surr: Phenol-d6		2980	1.00	3333	0	89.4	47.5	117	0	0		
Sample ID MB-12241	SampType:	MBLK	TestCode	: 8270LL_S	Units: µg/Kg		Prep Date:	11/10/2	2004	Run ID: <b>59</b>	73G_04111	1A
Client ID: ZZZZZ	Batch ID:	12241	TestNo	: SW8270D			Analysis Date	: 11/11/2	2004	SeqNo: 29	2026	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene		ND	66.7							, , , , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
1,2-Dichlorobenzene		ND	66.7									
1,3-Dichlorobenzene		ND	66.7									
1,4-Dichlorobenzene		ND	66.7									
2,4,5-Trichlorophenol		ND	333									
2,4,6-Trichlorophenol		ND	333									
2,4-Dichlorophenol		ND	200									
2,4-Dimethylphenol		ND	200									
2,4-Dinitrophenol		ND	333									
2,4-Dinitrotoluene		ND	333									
2,6-Dinitrotoluene		ND	333									
2-Chloronaphthalene		ND	66.7		•							
2-Chlorophenol		ND	66.7									
2-Methylnaphthalene		ND	66.7									
2-Methylphenol		ND	133									

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

Sample ID MB-12241	SampType: MBLK	TestCode: <b>8270LL_S</b> Units: μg/Kg	Prep Date: 11/10/2004	Run ID: 5973G_041111A
Client ID: ZZZZZ	Batch ID: 12241	TestNo: SW8270D	Analysis Date: 11/11/2004	SeqNo: <b>292026</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
2-Nitroaniline	ND	333		
2-Nitrophenol	ND	333		
3,3-Dichlorobenzidine	ND	333		
3-&4-Methylphenol	ND	333		
3-Nitroaniline	ND	333		
4,6-Dinitro-2-methylphenol	ND	333		
4-Bromophenyl phenyl ether	ND	66.7		
4-Chloro-3-methylphenol	ND	133		
4-Chloroaniline	ND	200		
4-Chlorophenyl phenyl ether	ND	66.7		
4-Nitroaniline	ND	333		
4-Nitrophenol	ND	333		
Acenaphthene	ND	66.7		
Acenaphthylene	ND	66.7		
Anthracene	ND	66.7		
Benz(a)anthracene	ND	66.7		
Benzo(a)pyrene	ND	66.7		
Benzo(b)fluoranthene	ND	66.7		
Benzo(g,h,i)perylene	ND	66.7		
Benzo(k)fluoranthene	ND	66.7		
Benzoic Acid	ND	667		
Benzyl Alcohol	ND	333		
Bis(2-chloroethoxy)methane	ND	66.7		
Bis(2-chloroethyl)ether	ND	133		
Bis(2-chloroisopropyl)ether	ND	66.7		
Bis(2-ethylhexyl)phthalate	ND	66.7		
Butyl benzyl phthalate	ND	66.7		
Carbazole	ND	66.7		
Chrysene	ND	66.7		
Di-n-butyl phthalate	ND	66.7		
Di-n-octylphthalate	ND	66.7		

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

CLIENT:

Project:

Time Oil Co.

Work Order:

0411033

NW Terminal Additional Well Install Phase III

ANALYTICAL QC SUMMARY REPORT

Sample ID MB-12241	SampType: MBLK	TestCoo	e: <b>8270LL_</b> S	Units: µg/Kg		Prep Da	te: 11/10/	2004	Run ID: 59	73G_04111°	1A
Client ID: ZZZZZ	Batch ID: 12241	TestN	lo: <b>SW8270D</b>			AnalysisDa	nte: 11/11/	2004	SeqNo: 29	2026	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	ND	66.7									
Dibenzofuran	ND	66.7									
Diethyl phthalate	ND	66.7									
Dimethylphthalate	ND	66.7									
Fluoranthene	ND	66.7									
Fluorene	18.67	66.7									J
Hexachlorobenzene	ND	66.7									
Hexachlorobutadiene	ND	133									
Hexachlorocyclopentadiene	ND	333									
Hexachloroethane	ND	133									
Indeno(1,2,3-cd)pyrene	ND	66.7									
Isophorone	ND	66.7									
N-Nitrosodi-n-propylamine	ND	133									
N-Nitrosodimethylamine	ND	66.7									
N-Nitrosodiphenylamine	ND	66.7									
Naphthalene	ND	66.7									
Nitrobenzene	9.333	66.7									J
Pentachlorophenol	ND	333									
Phenanthrene	ND	66.7									
Phenol	ND	133									
Pyrene	ND	66.7									
Surr:2,4,6-Tribromophenol	2339	1.00	3333	0	70.2	57.8	119	0	0		
Surr: 2-Fluorobiphenyl	3034	1.00	3333	0	91	52.6	93.2	0	0		
Surr: 2-Fluorophenol	2802	1.00	3333	0	84.1	40.7	111	0	0		
Surr:4-Terphenyl-d14	2796	1.00	3333	0	83.9	49.8	118	0	0		
Surr: Nitrobenzene-d5	2777	1.00	3333	0	83.3	44.8	103	0	0		
Surr: Phenol-d6	2868	1.00	3333	0	86	47.5	117	0	0		

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

Sample ID LCS-12233 Client ID: ZZZZZ	SampType: LCS  Batch ID: 12233		de: <b>8270LL_</b> \$	10 0		Prep Da Analysis Da	te: 11/9/2		Run ID: 591	73G_041109 1407	9B
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit		RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1261	66.7	1667	0	75.7	30.9	106	0	0	<del></del>	
1,4-Dichlorobenzene	1231	66.7	1667	0	73.9	31.4	98.2	0	0		
2,4-Dinitrotoluene	1417	333	1667	0	85	59.7	111	0	0		
2-Chlorophenol	1458	66.7	1667	0	87.5	46.2	105	0	0		
4-Chloro-3-methylphenol	1598	133	1667	0	95.9	47.4	114	0	0		
4-Nitrophenol	1510	333	1667	0	90.6	45.3	114	0	0		
Acenaphthene	1333	66.7	1667	0	80	48.2	105	0	0		
N-Nitrosodi-n-propylamine	1450	133	1667	0	87	42.4	101	0	0		
Pentachlorophenol	1103	333	1667	0	66.2	46.8	120	0	. 0		
Phenol	1499	133	1667	0	89.9	51.1	103	0	0		
Pyrene	1534	66.7	1667	0	92	56.7	130	0	0		
Sample ID LCS-12241	SampType: <b>LCS</b>	TestCod	de: <b>8270LL_S</b>	Units: μg/Kg		Prep Dat	te: 11/10/2	2004	Run ID: 597	73G_041111	Α
Client ID: ZZZZZ	Batch ID: 12241	TestN	lo: <b>SW8270D</b>			Analysis Da	te: <b>11/11/</b>	2004	SeqNo: 292	2028	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1171	66.7	1667	0	70.2	30.9	106	0	0		
1,4-Dichlorobenzene	1100	CC 7	1667	0	74.0	24.4	98.2	0	0		
	1199	66.7	1001	U	71.9	31.4	90.2	U			
2,4-Dinitrotoluene	1199 1382	333	1667	0	71.9 82.9	59.7	111	0	0		
				_				=	·		
2-Chlorophenol	1382	333	1667	0	82.9	59.7	111	0	0		
2-Chlorophenol 4-Chloro-3-methylphenol	1382 1362	333 66.7	1667 1667	0	82.9 81.7	59.7 46.2	111 105	0	0		
2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol	1382 1362 1558	333 66.7 133	1667 1667 1667	0 0 0	82.9 81.7 93.5	59.7 46.2 47.4	111 105 114	0 0	0 0 0		
2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene	1382 1362 1558 1362	333 66.7 133 333	1667 1667 1667 1667	0 0 0 0	82.9 81.7 93.5 81.7	59.7 46.2 47.4 45.3	111 105 114 114	0 0 0 0	0 0 0 0		
2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene N-Nitrosodi-n-propylamine Pentachlorophenol	1382 1362 1558 1362 1266	333 66.7 133 333 66.7	1667 1667 1667 1667	0 0 0	82.9 81.7 93.5 81.7 76	59.7 46.2 47.4 45.3 48.2	111 105 114 114 105	0 0 0 0	0 0 0 0		
2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene N-Nitrosodi-n-propylamine	1382 1362 1558 1362 1266 1443	333 66.7 133 333 66.7 133	1667 1667 1667 1667 1667	0 0 0 0 0	82.9 81.7 93.5 81.7 76 86.6	59.7 46.2 47.4 45.3 48.2 42.4	111 105 114 114 105 101	0 0 0 0 0	0 0 0 0 0		

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

Sample ID <b>0411033-05BMS</b>	SampType: <b>MS</b>	TestCo	de: <b>8270LL_</b> \$	S Units: µg/Kg		Prep Da	te: 11/9/2	004	Run ID: 59	73G_041109	)B
Client ID: LW037D(6-7)	Batch ID: 12233	Testi	No: <b>SW8270</b> E	•		Analysis Da	ite: 11/9/2	004	SeqNo: 29	1408	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	629.7	66.7	1667	0	37.8	31.1	92.7	0	0		
1,4-Dichlorobenzene	554.7	66.7	1667	0	33.3	16.5	85.6	0	0		
2,4-Dinitrotoluene	1098	333	1667	0	65.9	43.4	118	0	0		
2-Chlorophenol	933.7	66.7	1667	0	56	36.8	103	0	0		
4-Chloro-3-methylphenol	1177	133	1667	0	70.6	49.5	119	0	0		
4-Nitrophenol	1209	333	1667	0	72.5	45	111	0	0		
Acenaphthene	962	66.7	1667	0	57.7	45.1	102	0	0		
N-Nitrosodi-n-propylamine	939.7	133	1667	0	56.4	45.6	94.1	0	0		
Pentachlorophenol	760.3	333	1667	0	45.6	36.6	112	0	0		
Phenol	1086	133	1667	0	65.2	37.7	107	0	0		
Pyrene	1128	66.7	1667	0	67.7	42.4	131	0	0		
Sample ID <b>0411033-06BMS</b>	SampType: <b>MS</b>	TestCod	de: <b>8270LL_S</b>	Units: μg/Kg		Prep Dat	te: <b>11/10/</b>	2004	Run ID: 59'	73G_041111	A
Client ID: <b>LW038D</b> (7-8)	Batch ID: 12241	TestN	lo: <b>SW8270D</b>			AnalysisDa	te: <b>11/11/</b>	2004	SeqNo: <b>29</b> :	2030	
Client ID: LW038D (7-8)  Analyte	Batch ID: 12241  Result	TestN PQL		SPK Ref Val	%REC	•		RPD Ref Val	SeqNo: <b>29</b> :	2030 RPDLimit	Qual
` ,						•			•		Qual
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD		Qual
Analyte  1,2,4-Trichlorobenzene	Result 894.7	PQL 66.7	SPK value	SPK Ref Val	%REC 53.7	LowLimit 31.1	HighLimit 92.7	RPD Ref Val	%RPD		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene	Result 894.7 738.7	PQL 66.7 66.7	SPK value 1667 1667	SPK Ref Val	%REC 53.7 44.3	31.1 16.5	HighLimit 92.7 85.6	RPD Ref Val  0 0	%RPD 0 0		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene	Result 894.7 738.7 1390	PQL 66.7 66.7 333	SPK value 1667 1667 1667	SPK Ref Val  0 0 0	%REC 53.7 44.3 83.4	31.1 16.5 43.4	92.7 85.6 118	RPD Ref Val  0 0 0	%RPD 0 0 0		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol	Result 894.7 738.7 1390 1122	PQL 66.7 66.7 333 66.7	SPK value 1667 1667 1667 1667	SPK Ref Val 0 0 0 0 0 0	%REC 53.7 44.3 83.4 67.3	31.1 16.5 43.4 36.8	92.7 85.6 118 103	RPD Ref Val  0 0 0 0 0	%RPD 0 0 0 0 0 0 0 0		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol	Result  894.7 738.7 1390 1122 1593	PQL 66.7 66.7 333 66.7 133	SPK value 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0	%REC 53.7 44.3 83.4 67.3 95.6	31.1 16.5 43.4 36.8 49.5	92.7 85.6 118 103 119	RPD Ref Val  0 0 0 0 0 0 0	%RPD 0 0 0 0 0 0 0 0		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol	Result  894.7 738.7 1390 1122 1593 1420	PQL 66.7 66.7 333 66.7 133 333	SPK value 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0	%REC 53.7 44.3 83.4 67.3 95.6 85.2	31.1 16.5 43.4 36.8 49.5 45	92.7 85.6 118 103 119 111	RPD Ref Val  0 0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene	Result  894.7 738.7 1390 1122 1593 1420 1231	PQL 66.7 66.7 333 66.7 133 333 66.7	SPK value 1667 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0 0 0	%REC 53.7 44.3 83.4 67.3 95.6 85.2 73.8	31.1 16.5 43.4 36.8 49.5 45	92.7 85.6 118 103 119 111 102	RPD Ref Val  0 0 0 0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0 0 0		Qual
Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene N-Nitrosodi-n-propylamine	Result  894.7  738.7  1390  1122  1593  1420  1231  1252	PQL 66.7 66.7 333 66.7 133 333 66.7 133	SPK value 1667 1667 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0 0 0 0 0	%REC 53.7 44.3 83.4 67.3 95.6 85.2 73.8 75.1	31.1 16.5 43.4 36.8 49.5 45 45.1 45.6	92.7 85.6 118 103 119 111 102 94.1	RPD Ref Val  0 0 0 0 0 0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0 0 0 0 0		Qual

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

Sample ID 0411033-05BMSD	SampType: <b>MSD</b>	TestCo	de: <b>8270LL_</b> \$	S Units: µg/Kg		Prep Dat	e: 11/9/2	004	Run ID: 59	73G_041109	В
Client ID: LW037D(6-7)	Batch ID: 12233	Test	No: <b>SW8270</b> E	•		AnalysisDa	te: 11/9/2	004	SeqNo: 29	1409	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	780.3	66.7	1667	0	46.8	31.1	92.7	629.7	21.4	20	R
1,4-Dichlorobenzene	672.3	66.7	1667	0	40.3	16.5	85.6	554.7	19.2	20	
2,4-Dinitrotoluene	1129	333	1667	0	67.7	43.4	118	1098	2.81	20	
2-Chlorophenol	1068	66.7	1667	0	64.1	36.8	103	933.7	13.4	20	
4-Chloro-3-methylphenol	1293	133	1667	0	77.6	49.5	119	1177	9.37	20	
4-Nitrophenol	1037	333	1667	0	62.2	45	111	1209	15.3	20	
Acenaphthene	1035	66.7	1667	0	62.1	45.1	102	962	7.28	20	
N-Nitrosodi-n-propylamine	1109	133	1667	0	66.5	45.6	94.1	939.7	16.5	20	
Pentachlorophenol	651.3	333	1667	0	39.1	36.6	112	760.3	15.4	20	
Phenol	1208	133	1667	0	72.5	37.7	107	1086	10.6	20	
Pyrene	1180	66.7	1667	0	70.8	42.4	131	1128	4.53	20	
0 I ID 0444000 0055555					-						
Sample ID 0411033-06BMSD	SampType: <b>MSD</b>	TestCoo	de: <b>8270LL_S</b>	Units: µg/Kg		Prep Dat	e: <b>11/10/</b> 2	2004	Run ID: 59	73G_041111	Α
Sample   D   0411033-06BMSD   Client   D: LW038D (7-8)	SampType: <b>MSD</b> Batch ID: <b>12241</b>		de: <b>8270LL_S</b> lo: <b>SW8270D</b>			Prep Dat Analysis Dat			Run ID: 59 SeqNo: 29:		A
·			_	10 0	%REC	•	te: <b>11/11/</b>				<b>A</b> Qual
Client ID: <b>LW038D (7-8)</b>	Batch ID: 12241	TestN	lo: <b>SW8270D</b>	10 0		Analysis Dat	te: <b>11/11/</b>	2004	SeqNo: 29	2032	
Client ID: <b>LW038D (7-8)</b> Analyte	Batch ID: 12241  Result	TestN PQL	No: <b>SW8270D</b>	SPK Ref Val	%REC	Analysis Dat	te: <b>11/11/</b> HighLimit	RPD Ref Val	SeqNo: 29:	2032 RPDLimit	Qual
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene	Batch ID: 12241  Result  653	PQL 66.7	SPK value	SPK Ref Val	%REC 39.2	Analysis Dat LowLimit 31.1	te: <b>11/11/2</b> HighLimit 92.7	RPD Ref Val 894.7	SeqNo: <b>29</b> : %RPD 31.2	2032 RPDLimit	Qual R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene	Batch ID: 12241  Result  653 530	PQL 66.7 66.7	SPK value 1667	SPK Ref Val  0 0	%REC 39.2 31.8	Analysis Dat LowLimit 31.1 16.5	te: <b>11/11/2</b> HighLimit 92.7 85.6	RPD Ref Val 894.7 738.7	SeqNo: <b>29</b> %RPD 31.2 32.9	2032 RPDLimit 20 20	Qual R R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene	Batch ID: 12241  Result  653 530 1080	PQL 66.7 66.7 333	SPK value 1667 1667 1667	SPK Ref Val  0 0 0	%REC 39.2 31.8 64.8	Analysis Dat LowLimit 31.1 16.5 43.4	HighLimit 92.7 85.6 118	RPD Ref Val 894.7 738.7 1390	SeqNo: 29. %RPD 31.2 32.9 25.1	2032  RPDLimit  20 20 20	Qual R R R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol	Batch ID: 12241  Result  653 530 1080 827	PQL 66.7 66.7 333 66.7	SPK value 1667 1667 1667 1667	SPK Ref Val 0 0 0 0 0 0	%REC 39.2 31.8 64.8 49.6	Analysis Date	HighLimit 92.7 85.6 118 103	RPD Ref Val 894.7 738.7 1390 1122	SeqNo: 29: %RPD  31.2  32.9  25.1  30.2	2032  RPDLimit  20 20 20 20 20	Qual R R R R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol	Batch ID: 12241  Result  653 530 1080 827 1223	PQL 66.7 66.7 333 66.7 133	SPK value 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0	%REC 39.2 31.8 64.8 49.6 73.4	Analysis Dat LowLimit 31.1 16.5 43.4 36.8 49.5	HighLimit 92.7 85.6 118 103 119	894.7 738.7 1390 1122 1593	SeqNo: 29: %RPD  31.2  32.9  25.1  30.2  26.2	2032  RPDLimit  20 20 20 20 20 20 20 20	Qual R R R R R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol	Batch ID: 12241  Result  653 530 1080 827 1223 1040	PQL 66.7 66.7 333 66.7 133 333	SPK value  1667 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0	%REC 39.2 31.8 64.8 49.6 73.4 62.4	Analysis Dat LowLimit 31.1 16.5 43.4 36.8 49.5 45	HighLimit 92.7 85.6 118 103 119	894.7 738.7 1390 1122 1593 1420	SeqNo: 29: %RPD  31.2 32.9 25.1 30.2 26.2 30.8	2032  RPDLimit  20 20 20 20 20 20 20 20 20	Qual R R R R R R R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene	Batch ID: 12241  Result  653 530 1080 827 1223 1040 955	PQL 66.7 66.7 333 66.7 133 333 66.7	SPK value  1667 1667 1667 1667 1667 1667 1667	SPK Ref Val  0 0 0 0 0 0 0 0 0	%REC 39.2 31.8 64.8 49.6 73.4 62.4 57.3	Analysis Dat LowLimit 31.1 16.5 43.4 36.8 49.5 45 45.1	HighLimit 92.7 85.6 118 103 119 111	894.7 738.7 1390 1122 1593 1420 1231	SeqNo: 29: %RPD  31.2 32.9 25.1 30.2 26.2 30.8 25.2	2032  RPDLimit  20 20 20 20 20 20 20 20 20 20 20	Qual R R R R R R R R
Client ID: LW038D (7-8)  Analyte  1,2,4-Trichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2-Chlorophenol 4-Chloro-3-methylphenol 4-Nitrophenol Acenaphthene N-Nitrosodi-n-propylamine	Batch ID: 12241  Result  653 530 1080 827 1223 1040 955 901.7	PQL 66.7 66.7 333 66.7 133 333 66.7 133	SPK value  1667 1667 1667 1667 1667 1667 1667 16	SPK Ref Val  0 0 0 0 0 0 0 0 0 0 0	%REC 39.2 31.8 64.8 49.6 73.4 62.4 57.3 54.1	Analysis Dat LowLimit 31.1 16.5 43.4 36.8 49.5 45.4 45.1 45.6	HighLimit  92.7  85.6  118  103  119  111  102  94.1	894.7 738.7 1390 1122 1593 1420 1231 1252	SeqNo: 29: %RPD  31.2 32.9 25.1 30.2 26.2 30.8 25.2 32.5	2032  RPDLimit  20 20 20 20 20 20 20 20 20 20 20 20	Qual R R R R R R R R R

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: 8270LL\_S

Sample ID CCV-12233	SampType: CCV	TestCo	de: <b>8270LL_</b>	S Units: μg/Kg		Prep Da	te:		Run ID: 59	73G_041109	9B
Client ID: ZZZZZ	Batch ID: 12233	Test	No: <b>SW8270</b> E	)		AnalysisDa	ite: 11/9/2	004	SeqNo: 29	1405	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	1625	66.7	1667	0	97.5	80	120	0	0		
2,4,6-Trichlorophenol	1628	333	1667	0	97.7	80	120	0	0		
2,4-Dichlorophenol	1668	200	1667	0	100	80	120	0	0		
2-Nitrophenol	1810	333	1667	0	109	80	120	0	0		
4-Chloro-3-methylphenol	1853	133	1667	0	111	80	120	0	0		
Acenaphthene	1586	66.7	1667	0	95.2	80	120	0	0		
Benzo(a)pyrene	1846	66.7	1667	0	111	80	120	0	0		
Di-n-octylphthalate	1913	66.7	1667	0	115	80	120	0	0		
Fluoranthene	1640	66.7	1667	0	98.4	80	120	0	0		
Hexachlorobutadiene	1478	133	1667	0	88.7	80	120	0	0		
N-Nitrosodiphenylamine	1830	66.7	1667	0	110	80	120	0	0		
Pentachlorophenol	1520	333	1667	0	91.2	80	120	0	0		
Phenol	1786	133	1667	0	107	80	120	0	0		
Sample ID CCV-12241	SampType: <b>CCV</b>	TestCod	le: <b>8270L</b> L_S	Units: µg/Kg		Prep Dat	e:		Run ID: 59	73G_041111	IA
Client ID: ZZZZZ	Batch ID: 12241	TestN	lo: <b>SW8270D</b>	•		Analysis Da	te: 11/11/	2004	SeqNo: 29:	2023	
						,					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	•	HighLimit		%RPD	RPDLimit	Qual
•	Result	PQL 66.7	SPK value	SPK Ref Val		•			'		Qual
1,4-Dichlorobenzene				· · · · · · · · · · · · · · · · · · ·	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol	1586	66.7	1667	0	%REC 95.2	LowLimit 80	HighLimit	RPD Ref Val	%RPD		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol	1586 1478	66.7 333	1667 1667	0	%REC 95.2 88.7	LowLimit 80 80	HighLimit 120 120	RPD Ref Val	%RPD 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol	1586 1478 1679	66.7 333 200	1667 1667 1667	0 0 0	%REC 95.2 88.7 101	80 80 80 80	HighLimit 120 120 120	RPD Ref Val  0 0 0	%RPD 0 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol	1586 1478 1679 1786	66.7 333 200 333	1667 1667 1667	0 0 0	%REC 95.2 88.7 101 107	80 80 80 80	HighLimit  120 120 120 120	0 0 0 0 0	%RPO 0 0 0 0 0 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene	1586 1478 1679 1786 1858	66.7 333 200 333 133	1667 1667 1667 1667	0 0 0 0	%REC  95.2 88.7 101 107 111	80 80 80 80 80 80	HighLimit  120 120 120 120 120 120	RPD Ref Val  0 0 0 0 0 0	%RPD 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene	1586 1478 1679 1786 1858 1531	66.7 333 200 333 133 66.7	1667 1667 1667 1667 1667	0 0 0 0 0	%REC 95.2 88.7 101 107 111 91.9	80 80 80 80 80 80	HighLimit  120 120 120 120 120 120 120 120	RPD Ref Val  0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate	1586 1478 1679 1786 1858 1531	66.7 333 200 333 133 66.7 66.7	1667 1667 1667 1667 1667 1667	0 0 0 0 0	%REC 95.2 88.7 101 107 111 91.9 113	80 80 80 80 80 80 80 80	HighLimit  120 120 120 120 120 120 120 120 120	RPD Ref Val  0 0 0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate Fluoranthene	1586 1478 1679 1786 1858 1531 1881	66.7 333 200 333 133 66.7 66.7	1667 1667 1667 1667 1667 1667 1667	0 0 0 0 0 0	%REC  95.2 88.7 101 107 111 91.9 113 110	80 80 80 80 80 80 80 80 80	HighLimit  120 120 120 120 120 120 120 120 120 12	RPD Ref Val  0 0 0 0 0 0 0 0 0 0 0 0	%RPO 0 0 0 0 0 0 0 0 0		Qual
1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate Fluoranthene Hexachlorobutadiene	1586 1478 1679 1786 1858 1531 1881 1839	66.7 333 200 333 133 66.7 66.7 66.7	1667 1667 1667 1667 1667 1667 1667 1667	0 0 0 0 0 0 0	%REC  95.2  88.7  101  107  111  91.9  113  110  97.6	80 80 80 80 80 80 80 80 80	HighLimit  120 120 120 120 120 120 120 120 120 12	RPD Ref Val  0 0 0 0 0 0 0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0 0 0 0 0		Qual
Analyte  1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2-Nitrophenol 4-Chloro-3-methylphenol Acenaphthene Benzo(a)pyrene Di-n-octylphthalate Fluoranthene Hexachlorobutadiene N-Nitrosodiphenylamine Pentachlorophenol	1586 1478 1679 1786 1858 1531 1881 1839 1627	66.7 333 200 333 133 66.7 66.7 66.7 133	1667 1667 1667 1667 1667 1667 1667 1667	0 0 0 0 0 0 0	%REC  95.2  88.7  101  107  111  91.9  113  110  97.6  88.7	80 80 80 80 80 80 80 80 80 80	HighLimit  120 120 120 120 120 120 120 120 120 12	RPD Ref Val  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%RPD  0 0 0 0 0 0 0 0 0 0 0 0 0		Qual

**Oualifiers:** 

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX\_S

								• •					
Sample ID	MBLK	SampType:	MBLK	TestCoo	le: <b>NWTPHD</b>	X_S Units: mg/K	g	Prep Da	te: 11/8/2	004	Run ID: GC-	M_041110	С
Client ID:	ZZZZZ	Batch ID:	12222	TestN	lo: <b>NWTPH-C</b>	)x		AnalysisDa	ite: 11/10/	2004	SeqNo: <b>291</b> 7	760	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			ND	15.0									
Lube Oil			ND	50.0									
Surr:o-	Terphenyl		31.4	1.00	33.33	0	94.2	50	150	0	0		
Sample ID	MBLK	SampType:	MBLK	TestCod	e: <b>NWTPHD</b>	X_S Units: mg/Kg	9	Prep Dat	te: 11/8/2	004	Run ID: GC-	M_0411110	3
Client ID:	ZZZZZ	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	x		AnalysisDa	te: 11/11/	2004	SeqNo: <b>292</b> 1	174	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			ND	15.0									
Lube Oil			ND	50.0									
Surr: o-7	Terphenyl		35.17	1.00	33.33	0	106	50	150	0	0		
Sample ID	LCS	SampType:	LCS	TestCod	e: <b>NWTPHD</b>	X_S Units: mg/Kg	3	Prep Dat	e: <b>11/8/2</b>	004	Run ID: GC-	M_0411100	:
Client ID:	ZZZZZ	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	×		Analysis Da	te: <b>11/10/</b> 2	2004	SeqNo: <b>2917</b>	<b>'</b> 61	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			166.7	15.0	167.6	0	99.4	76.3	122	0	0		
Lube Oil			190.8	50.0	167.6	0	114	69.9	127	0	0		
Sample ID	0411030-04ADUP	SampType:	DUP	TestCod	e: <b>NWTPHD</b> )	K_S Units: mg/Kg	g-dry	Prep Dat	e: <b>11/8/2</b> 0	004	Run ID: GC-I	M_0411110	;
Client ID:	ZZZZZ	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	x		Analysis Da	te: <b>11/11/</b>	2004	SeqNo: <b>2921</b>	82	
Analyte			Result	PQL.	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD I	RPDLimit	Qual
Diesel			ND	17.3	0	0	0	0	0	0	0	20	
Lube Oil			ND ·	57.8	0	0	0	0	0	118.6	0	20	
Sample ID	0411033-02ADUP	SampType:	DUP	TestCod	e: <b>NWTPHD</b> )	(_S Units: mg/Ko	g-dry	Prep Dat	e: <b>11/8/2</b> 0	004	Run ID: GC-I	VI_041111C	;
Client ID:	LW040S (21-21.5)	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	x		Analysis Dat	te: 11/11/2	2004	SeqNo: <b>2921</b>	83	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD F	RPDLimit	Qual

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

CLIENT:

Project:

Time Oil Co.

WorkOrder: 0411033

NW Terminal Additional Well Install Phase III

#### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX\_S

Sample ID Client ID:	0411033-02ADUP LW040S(21-21.5)	SampType: Batch ID:			lo: NWTPHD	X_S Units: mg/K	-	Prep Da Analysis Da	te: 11/8/2 ate: 11/11/		Run ID: 0	GC-M_041111 92183	IC
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	•		ND	17.4	0	0	0	0	0	0	(		
Lube Oil	.=		ND	57.9	0	0	0	0	0	0	(	20	
Sample ID	CCV	SampType:	CCV	TestCod	le: <b>NWTPHD</b>	X_S Units: mg/Kg		Prep Da	te:		Run ID: 6	C-M_041110	C
Client ID:	ZZZZZ	Batch ID:	12222	TestN	lo: <b>NWTPH-</b> E	×		AnalysisDa	ite: 11/10/	2004	SeqNo: 2	91762	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			343.6	15.0	334	0	103	85	115	0	C	H	
Lube Oil			352.2	50.0	333.3	0	106	85	115	0	C		
Sample ID	CCV	SampType:	CCV	TestCod	e: <b>NWTPHD</b>	X_S Units: mg/Kg		Prep Dat	te:		Run ID: G	C-M_041110	С
Client ID:	ZZZZZ	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	×		AnalysisDa	te: 11/10/	2004	SeqNo: 2	91777	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			346	15.0	334	0	104	85	115	0	0		
Lube Oil			341.2	50.0	333.3	0	102	85	115	0	0		
Sample ID	CCV	SampType:	CCV	TestCod	e: <b>NWTPHD</b>	K_S Units: mg/Kg		Prep Dat	te:		Run ID: G	C-M_041111	С
Client ID:	ZZZZZ	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	x		AnalysisDa	te: 11/11/2	2004	SeqNo: 2	92175	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			346	15.0	334	0	104	85	115	0	0		
Lube Oil			341.2	50.0	333.3	0	102	85 	115	0	0		
Sample ID	ccv	SampType:	ccv	TestCode	e: <b>NWTPHD</b> )	CS Units: mg/Kg		Prep Dat	e:		Run ID: G	C-M_041111	С
Client ID:	ZZZZZ	Batch ID:	12222	TestN	o: <b>NWTPH-D</b>	x		Analysis Da	te: 11/11/2	2004	SeqNo: 29	2184	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel			345	15.0	334	0	103	85	115	0	0		
Lube Oil			342.1	50.0	333.3	0	103	85	115	0	0		

Oualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Project:

CLIENT:

Work Order:

Time Oil Co.

0411033

NW Terminal Additional Well Install Phase III

#### **ANALYTICAL QC SUMMARY REPORT**

TestCode: NWTPHGX\_S

Sample ID Client ID:	MBLK ZZZZZ	SampType: Batch ID:			e: NWTPHG	X_S Units: mg/	/Kg	Prep Date Analysis Dat	e: 11/4/20 te: 11/4/20		Run ID: G	C-H_041104/ 00025	A
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Surr:4-E	Bromofluorobenzene		ND 95.04	2.50 1.00	100	0	95	50	150	0	0		
Sample ID	MBLK	SampType:	MBLK	TestCode	e: NWTPHG	X_S Units: mg/	'Kg	Prep Date	e: <b>11/4/20</b>	04	Run ID: G	C-I_041105A	
Client ID:	ZZZZZ	Batch ID:	12195	TestNo	: NWTPH-G	ix		AnalysisDat	e: <b>11/5/20</b>	04	SeqNo: 29	0553	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Surr:4-B	romofluorobenzene		3.36 109.1	2.50 1.00	100	0	109	50	150	0	0		
Sample ID	LCS	SampType:	LCS	TestCode	: NWTPHG	K_S Units: mg/	Kg	Prep Date	e: <b>11/4/20</b>	04	Run ID: G	C-H_041104A	\
Client ID:	ZZZZZ	Batch ID:	12195	TestNo	: NWTPH-G	×		Analysis Dat	e: <b>11/4/20</b>	04	SeqNo: 29	0026	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			34.99	2.50	30	0	117	53.5	121	0	0		
Sample ID	0411028-01ADUP	SampType:	DUP	TestCode	: NWTPHG	CS Units: mg/	Kg-dry	Prep Date	e: <b>11/4/20</b>	04	Run ID: G0	C-H_041104A	\
Client ID:	ZZZZZ	Batch ID:	12195	TestNo	: NWTPH-G	x		Analysis Date	e: <b>11/4/20</b>	04	SeqNo: 29	0034	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND .	3.10	0	0	0	0	0	0	0	20	
Sample ID	0411033-07ADUP	SampType:	DUP	TestCode	: NWTPHG)	CS Units: mg/	Kg-dry	Prep Date	: 11/4/20	04	Run ID: G0	C-I_041105A	
Client ID:	LW039D (5-6)	Batch ID:	12195	TestNo	: NWTPH-G	x		Analysis Date	e: <b>11/5/20</b> 0	04	SeqNo: 29	0563	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	3.36	0	0	0	0	0	0	0	20	

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

CLIENT:

Time Oil Co.

Work Order:

0411033

Project:

NW Terminal Additional Well Install Phase III

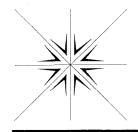
#### ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHGX\_S

Sample ID Client ID:	CCV	SampType: CCV Batch ID: 12195	TestCode: NWTPHGX_S Units: mg/Kg TestNo: NWTPH-Gx	Prep Date: Analysis Date: 11/4/2004	Run ID: <b>GC-H_041104A</b> SeqNo: <b>290027</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Va	al %RPD RPDLimit Qual
Gasoline		3278	2.50 3000 0	109 80 120	0 0
Sample ID Client ID:	CCV ZZZZZ	SampType: CCV Batch ID: 12195	TestCode: <b>NWTPHGX_S</b> Units: <b>mg/Kg</b> TestNo: <b>NWTPH-Gx</b>	Prep Date: Analysis Date: 11/4/2004	Run ID: <b>GC-H_041104A</b> SeqNo: <b>290035</b>
Analyte		Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Va	al %RPD RPDLimit Qual
Gasoline		2838	2.50 2500 0	114 80 120 (	0
Sample ID Client ID:	CCV ZZZZZ	SampType: CCV Batch ID: 12195	TestCode: <b>NWTPHGX_S</b> Units: <b>mg/Kg</b> TestNo: <b>NWTPH-Gx</b>	Prep Date: Analysis Date: 11/5/2004	Run ID: GC-I_041105A SeqNo: 290555
· '		• • •		,	SeqNo: <b>290555</b>
Client ID:		Batch ID: <b>12195</b>	TestNo: <b>NWTPH-Gx</b>	Analysis Date: 11/5/2004  %REC LowLimit HighLimit RPD Ref Va	SeqNo: <b>290555</b>
Client ID: Analyte	77777	Batch ID: 12195  Result	TestNo: <b>NWTPH-Gx</b> PQL SPK value SPK Ref Val	Analysis Date: 11/5/2004  %REC LowLimit HighLimit RPD Ref Va	SeqNo: <b>290555</b> I %RPD RPDLimit Qual
Client ID: Analyte Gasoline Sample ID	CCV	Batch ID: 12195  Result 2474  SampType: CCV	TestNo: NWTPH-Gx  PQL SPK value SPK Ref Val  2.50 2500 0  TestCode: NWTPHGX_S Units: mg/Kg	Analysis Date: 11/5/2004  %REC LowLimit HighLimit RPD Ref Va 99 80 120 0  Prep Date:	SeqNo: 290555

#### KEY TO FLAGS

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- CR Result for this analyte maybe biased due to interferences.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended hold time.
- J The result for this analyte is between the MFL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- P Detection levels of Methylene Chloride may be laboratory contamination, due to previous analysis or background levels.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- S Recovery is outside control limits.
- SC Closing CCV exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- \* The result for this parameter was greater that the maximum contaminant level of the TCLP regulatory limit.



19761 S.W. 95th Place Tualatin, OR 97062 (503) 612-9007 Fax (503) 612-8572 1 (877) 612-9007

December 01, 2004

DEC - 9 2004

Mark Chandler Time Oil Co. 2737 West Commodore Way Seattle, WA 98199-1257

TEL: (206) 285-2400 FAX (206) 285-7833

RE: NW Terminal/Well Replacement-231001

Dear Mark Chandler:

Order No.: 0411117

Specialty Analytical received 1 sample on 11/19/2004 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Ned Engleson

Project Manager

echnical Review

CC:

Terry McGoorty @ Landau Associates

**Seattle (Edmonds)** (425) 778-0907

☐ **Tacoma** (253) 926-2493 ☐ **Spokane** (509) 327-9737 ☐ Portland (Tigard) (503) 443-6010 04:11.117

A Abbooth test	Chain-of-Cu	stody necord	
Project Name \improved Improved Drug	Project No 23 (O).	Testing Parameter	S
Project Location/Event NWTERMINAL	Well Keplacement		
Sampler's Name CHRISTY	7-41 (28b)	8	Turnaround Time
	SHEQSON (C	3/	Accelerated
	BOX )		/ Accelerated
Send Results To	No. of		
	me Matrix Containers / 🧡 /		Observations/Comments
LWODYTR(14.5-15) 11/18/04/10	45 8011. Q. /		
			MGASS PIX KOSXXX
			TO KUSEKHI BROOKS
			CHRISTY JOHNSON
			THE SCOUTE
			MAKECHANISCO
			4 Jaky MCCOUKIN
			TO THE
			WALVER SCI)
Special Shipment/Handling or Storage Requirements		Metho Shipm	d of HAMDDELLERO
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Signature Signa Signa	andy Hillyard	Signature	Signature
Printed Name Printe	d Name Decial D	Printed Name	Printed Name
Company	any 0	Company	Company
Date //////// Time //// Date	11/19/04 Time 13:35	Date Time	DateTime

14-Dec-04

Lab Order:

0411117

Client:

Time Oil Co.

Project:

NWTerminal/WellReplacement-

**DATESREPORT** 

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Da
0411117-01A	LW004DR(14.5-15)	11/18/2004 10:45:00 AM	Soil	Semi-Volatile Compounds- Acid Fraction		11/23/2004	11/29/2004

**Date:** 01-Dec-04

**CLIENT:** Project:

Time Oil Co.

NW Terminal/Well Replacement-231001

Lab Order:

0411117

Lab ID: Client Sample ID: 0411117-01

Collection Date: 11/18/2004 10:45:00 AM

LW004DR (14.5-15)

SOIL Matrix:

Analyses Result Limit Qual Units DF Date Analyzed SEMI-VOLATILE COMPOUNDS- ACID FRACTION Analyst: bda E8270B-AF Pentachlorophenol μg/Kg 1 11/29/2004 12:02:00 PM ND 333 Surr: 2,4,6-Tribromophenol 73.7 57.8-119 %REC 11/29/2004 12:02:00 PM

**Date:** 01-Dec-04

CLIENT:

Time Oil Co.

WorkOrder:

0411117

Project: NWTerminal/WellReplacement-231001

#### **ANALYTICAL QC SUMMARY REPORT**

TestCode: 8270AF\_S

Sample ID	MB-12326	SampType:	MBLK	TestCode	e: <b>8270AF</b> _\$	5 Units: µg/Kg		Prep Dat	e: 11/23/2	2004	Run ID: 59	73G_041129	9A
Client ID:	ZZZZZ	Batch ID:	12326	TestNo	o: <b>E8270B-A</b>	AF.		Analysis Da	te: <b>11/29/</b> 2	2004	SeqNo: 29	5083	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachloro	ophenol		ND	333									
Surr:2,4,	6-Tribromophenol		2250	0	3333	0	67.5	57.8	119	0	0		
Sample ID	LCS-12326	SampType:	LCS	TestCode	e: <b>8270AF_S</b>	Units: µg/Kg		Prep Dat	e: <b>11/23/2</b>	2004	Run ID: 59	73G_041129	)A
Client ID:	ZZZZZ	Batch ID:	12326	TestNo	: <b>E8270B-A</b>	F		Analysis Dat	te: <b>11/29/</b> 2	2004	SeqNo: 29	5084	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachloro	phenol		942.3	333	1667	0	56.5	46.8	120	0	0		
Sample ID	0411117-01AMS	SampType:	MS	TestCode	e: 8270AF_S	Units: μg/Kg		Prep Date	e: 11/23/2	2004	Run ID: <b>59</b>	73G_041129	)A
Client ID:	LW004DR (14.5-15)	Batch ID:	12326	TestNo	: <b>E8270B-A</b>	F		Analysis Dat	te: <b>11/29/2</b>	2004	SeqNo: 29	5086	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachloro	pphenol		929	333	1667	48.33	52.8	36.6	112	0	0		
Sample ID	0411117-01AMSD	SampType:	MSD	TestCode	e: 8270AF_S	Units: µg/Kg		Prep Date	e: <b>11/23/2</b>	2004	Run ID: 59	73G_041129	A
Client ID:	LW004DR (14.5-15)	Batch ID:	12326	TestNo	E8270B-A	F		Analysis Dat	e: <b>11/29/2</b>	2004	SeqNo: 29	5087	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachloro	phenol		947.3	333	1667	48.33	53.9	36.6	112	929	1.95	20	
Sample ID	CCV-12326	SampType:	CCV	TestCode	: 8270AF_S	Units: µg/Kg		Prep Date	e:		Run ID: <b>59</b>	73G_041129	Α
Client ID:	ZZZZZ	Batch ID:	12326	TestNo	: E8270B-A	F		Analysis Dat	e: <b>11/29/2</b>	004	SeqNo: 29	5082	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachloro	phenol		1427	333	1667	0	85.6	80	120	0	0		

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blan

R - RPD outside accepted recovery limits

## **Electronic Cumulative Detected Groundwater Data**